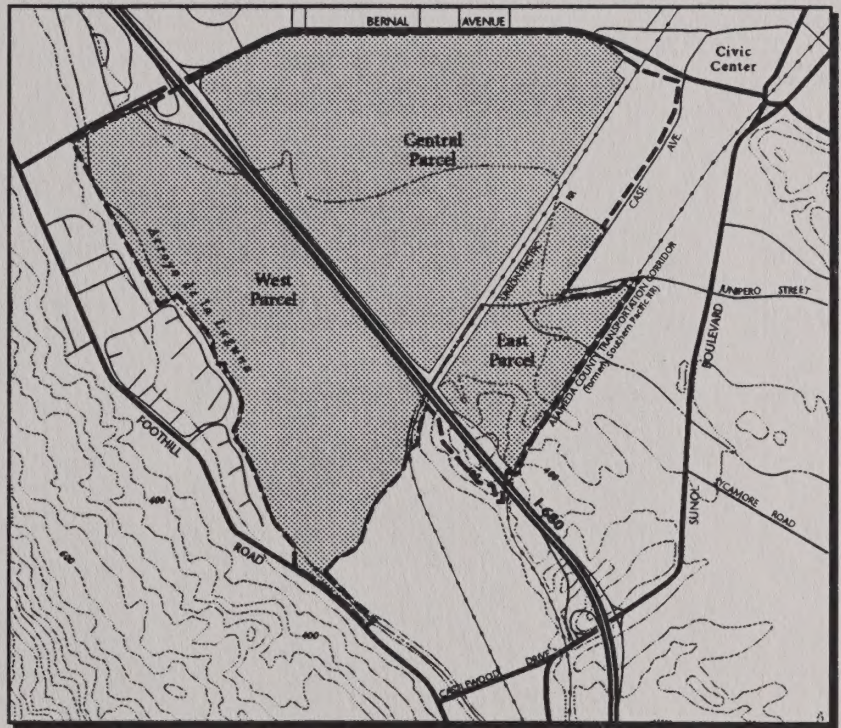


# DRAFT ENVIRONMENTAL IMPACT REPORT

## CITY OF PLEASANTON



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*Development Agreement*

*Rezoning and*

*Other Related Actions*

*Prepared by*  
**Mundie & Associates**  
**and**  
**City of Pleasanton**

MAY 1997







DRAFT

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CITY OF PLEASANTON  
AND  
SAN FRANCISCO WATER DEPARTMENT

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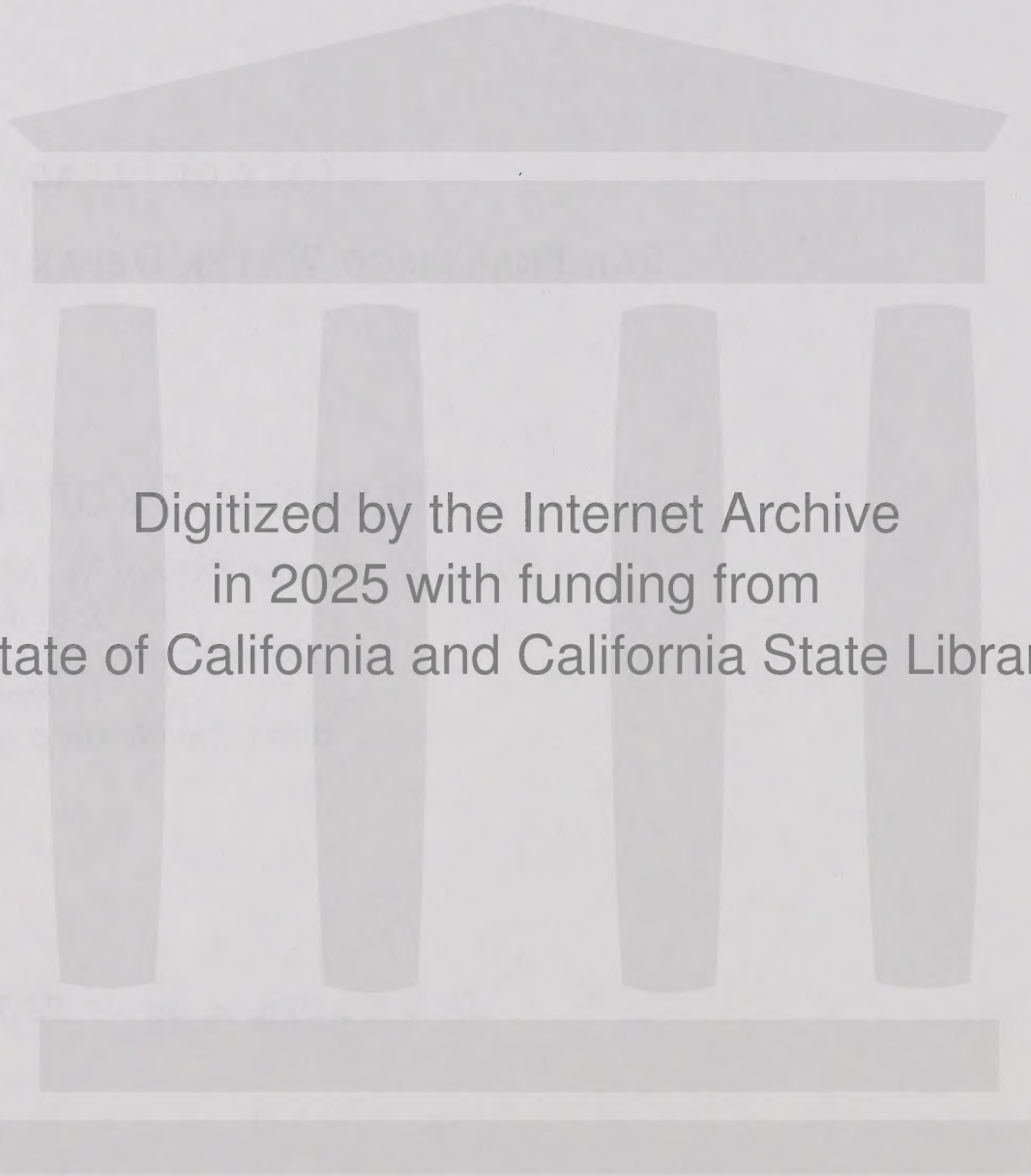
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# **CHAPTER 1**

## **SUMMARY**

This environmental impact report (EIR) has been prepared in response to the application by the City and County of San Francisco for City of Pleasanton approval of a specific plan for the San Francisco Water Department site (the “Bernal property”), a preliminary development plan, a development agreement, and related implementing actions.

The EIR has been prepared in accordance with the California Environmental Quality Act of 1970, as amended, and state guidelines for the implementation of CEQA.

### **A. PROJECT SETTING**

The project is located primarily in unincorporated Alameda County on the south side of Bernal Avenue east and west of Interstate 680 (I-680). A location map (Figure 1) appears at the end of this chapter.

The site consists of  $\pm 508$  acres owned by of the City and County of San Francisco and  $\pm 88$  acres in other ownerships. The site is almost fully surrounded by lands within the City of Pleasanton. Portions of the specific plan area have already been annexed to the City of Pleasanton; annexation of the balance is proposed as one of the actions encompassed by this EIR.

Most of the site is in use as dry-land agriculture. Other uses include roads, railroads, water courses, and a school.

### **B. PROJECT DESCRIPTION**

The CEQA project consists of a series of zoning actions (prezoning or rezoning, as applicable), pre-annexation agreement(s), annexation actions, and adoption of a specific plan. The specific plan includes residential development ( $\pm 200$  acres), “Village” commercial and commercial office development ( $\pm 50$  acres), a golf course ( $\pm 160$  acres), civic and public uses (school, fire station, roads, and parks), and other open space.

### **C. PURPOSE AND USES OF THE EIR**

The specific plan, to be published by the City of Pleasanton in late May or June, 1997, has been prepared in response to the information and analysis presented in this DEIR. It was formulated initially based on the “Cooperative Plan” that was agreed to in principle by the City of Pleasanton, the City and County of San Francisco, and the County of Alameda in January, 1996; it has been adapted in the course of detailed planning studies and the environmental review presented in this document.

The specific plan proposed for action by the City of Pleasanton draws on elements of the alternatives and site plan options described and evaluated below, and incorporates mitigation measures that address potential impacts while taking into account the objectives of the project sponsor.

The principal purpose of this EIR is to provide a basis for the review of the specific plan by decisionmakers and the public. The EIR is also intended for use by responsible agencies in considering any actions they must take, or permits they must issue, for the plan to be implemented.

## **D. ORGANIZATION OF THIS EIR**

This EIR consists of nine chapters plus appendices.

Chapter 2 presents a description of the project and the EIR. Chapter 3 describes the evolution of the project alternatives. Chapter 4 reviews nine site design variations generally consistent with the overall development plan alternatives.

Chapter 5, "Setting, Impacts, and Mitigation Measures," examines the likely environmental impacts of the specific plan. While the EIR project is the Cooperative Plan (January, 1996), the plan has been evolving since the time of the Cooperative Plan agreement, and this EIR gives equal consideration to Alternative 1 (the Preferred Plan of May, 1996). Alternative 2 is evaluated at a lesser degree of detail, with a focus on the differences in impact between it and the Cooperative and Preferred Plans. Alternative 3, the County specific plan, was analyzed in detail in Alameda County's EIR on the specific plan it adopted for the San Francisco Water Department Bernal property in August, 1996 (DEIR, March 1995; Recirculated DEIR, October 1995; FEIR, published June 1996 and certified August 1, 1996).

Chapter 6, Consistency with Local Planning, reviews the proposed specific plan in with reference to the goals, policies and programs of the Pleasanton General Plan (1996) and planning considerations that relate to local activities and responsibilities of non-City agencies.

Chapters 7, 8, and 9 address other CEQA-mandated topics: cumulative and growth-inducing impacts, other environmental considerations, and sources drawn on in preparation of this EIR. The document concludes with appendices that relate to the project and to the technical environmental analysis.

## **E. PROJECT IMPACTS AND RECOMMENDED MITIGATION MEASURES**

Impacts of the proposed project with adoption of either the Cooperative Plan or the Preferred Plan that would be significant in the absence of mitigation are summarized in the table on pp. 3 through ##. For each impact, the mitigation measures recommended in Chapter 5 are described and the level of significance after mitigation is identified for each plan. Cumulative impacts are also identified by a "✓" in the final column of the summary table.

The post-mitigation level of significance indicators are:

- |   |   |
|---|---|
| S: significant  | (C): contributes to cumulative impact           |
| LS: less than significant   | n.a.: impact does not apply to this alternative |
| * no mitigation required  | ND: not determinable                            |
| † Less than significant before mitigation, but contributes to cumulatively significant impact.  |   |
| NM: no mitigation possible (beyond policies, programs, and other regulations already in place). |   |



Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
A. LAND USE				
Impact A1. Potential for conflict between offsite land uses and onsite land uses.	<p>Measure A1a. Apply appropriate City land use regulations and development controls to minimize potential conflicts.</p> <p>Measure A1b. Require that developers of residential property east of Case Avenue or its southerly extension include disclosure of nearby uses in their sales and contract materials.</p> <p>Measure A1c. Along the eastern perimeter of the project site south of Junipero Avenue, incorporate into the plan measures to accomplish visual separation between uses on the East Parcel and uses beyond, including uses in the Alameda County transportation corridor site and industrial uses farther east.</p>	LS	LS	
Impact A2. Potential for safety hazards for residences, passing cars, pedestrians, and bicyclists from stray golf shots.	<p>Measure A2a. Require that purchasers of homes on the golf course be notified prior to purchase of potential hazards to people and property that may result from stray golf shots.</p>	LS	LS	

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact A2. (cont'd)	<p>Measure A2b. Minimize the potential for stray shots to hit residences, passing cars, and/or pedestrians by:</p> <p>(1) Designing the course with appropriate fairway widths and landscaping/fencing to minimize the potential for golf balls to land on residences or within yards, <i>or</i></p> <p>(2) Requiring adequate fairway widths at landing zones (minimum 200 feet) bordering streets and trails, and requiring landscaping/fencing between roadways/trails and fairways to retain errant bouncing balls, <i>or</i></p> <p>(3) Revising the Preferred Plan to provide for buildings along fairways at critical landing zones.</p>			
Impact A3. Conversion of prime agricultural land to non-agricultural uses.	Measure A3. None.	S (NM)	S (NM)	✓
<b>B. INFRASTRUCTURE SYSTEMS: DRAINAGE</b>				
Impact B1. Runoff from the site under the 100-year flood may contribute to cumulative downstream flooding and channel erosion if onsite facilities are improperly sized or managed.	Measure B1a: Provide for onsite detention/retention of storm waters to offset the effects of the increase in runoff to the Arroyo resulting from site development, and prepare a maintenance plan for detention/retention facilities.	LS <sup>†</sup>	LS <sup>†</sup>	✓



Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact B1. (cont'd)	Measure B1b. The detention/retention facilities should be operated to contain and release runoff at a rate consistent with the Zone 7 Master Plan.			
Impact B2. The site under its current condition has a potential for flooding when flood flows exceed the FEMA 100-year flood event.	Measure B2 (optional). Investigate feasible measures to protect the site from flood flows in excess of the FEMA 100-year storm event in a manner consistent with feasible grading options and which does not place existing development on the west side of the Arroyo at risk of a FEMA 500-year flood.	* (mitigation optional)	* (mitigation optional)	
Impact B3. Localized flooding may occur due to storms in excess of design capacities of side channels.	Measure B3. Design subdivision (channels, culverts, streets, open spaces, retention basins, and site grading) in a comprehensive manner such that no habitable buildings are subject to flooding in a 100-year storm event.	LS	LS	
Impact B4. Development of the project could conflict with implementation of Zone 7 regional flood control plans for the Arroyo de la Laguna south of the Bernal Avenue bridge.	Measure B4a: Implement the Cooperative Plan bypass proposal, if satisfactory to Zone 7.	LS	LS	

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact B4. (cont'd)	<p>Measure B4b: Set back development sufficiently to accommodate a flow of 27,000 cfs (with WSEL of 316 feet as illustrated in Figure 8H) in a channel widened to the east only; if Zone 7 adopts a Master Plan for regional flood control prior to the submittal of the project grading plan, adjust setback consistent with that plan.</p> <p>Measure B4c: Coordinate any channel improvement plans undertaken by Zone 7 with the development of the West Parcel, if these improvements can be timed with development of the West Parcel.</p>			
Impact B5. Potential for degradation of water quality.	<p>Measure B5a: Develop a stormwater quality management program.</p> <p>Measure B5b: Prepare a water quality management plan for the golf course, driving range and parks.</p>	LS	LS	✓



Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		"✓" if
		Cooperative Plan	Preferred Plan	Cumulative Impact
C. INFRASTRUCTURE SYSTEMS: WATER				
Impact C1. Cumulative increase in demand for potable water.	Measure C1a. Require payment of regional and City connection fees.  Measure C1b. Require water conservation measures.  Measure C1c. Design golf course to minimize potable water use.  Measure C1d. Design golf course to accept recycled water.  Measure C1e. Use recycled water for golf course irrigation.  Measure C1f. Investigate use of groundwater for irrigation of landscaped areas and parks/public areas.  Measure C1g. During the design phase of the recycled water project, investigate potential for recycled water line to serve additional sites, including Castlewood, fairgrounds, I-680 ROW, parks, and other landscaped public areas, and size the pipeline accordingly.	LS	LS	✓
Impact C2. Cumulative increase in demand for water distribution capacity.	Measure C2a. Require payment of regional and City connection fees. (Same as Measure C1a.)	LS	LS	✓

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact C2. (cont'd)	<p>Measure C2b. Require water conservation measures. <i>(Same as Measure C1b.)</i></p> <p>Measure C2c. Require construction of improvements to the Pleasanton water system to meet City standards.</p>			
Impact C3. Cumulative increase in demand for water storage system capacity.	<p>Measure C3a. Require payment of connection fees. <i>(Same as Measures C1a and C2b.)</i></p> <p>Measure C3b. Require water conservation measures. <i>(Same as Measures C1a and C2a.)</i></p> <p>Measure C3c. Use recycled water for golf course irrigation. <i>(Same as Measure C1e.)</i></p>	LS	LS	✓
Impact C4. (If all or part of ground-water withdrawals from the site are determined to be in addition to that of existing groundwater users, which equals annual safe yield:) Increase in groundwater withdrawal beyond the annual safe yield.	<p>Measure C4a. Pay Zone 7 fees to compensate for over-withdrawal of ground-water.</p> <p>Measure C4b. Design golf course to minimize water use unless recycled water source is available. <i>(Same as Measure C1c.)</i></p>	LS	LS	✓



Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		"✓" if
		Cooperative Plan	Preferred Plan	Cumulative Impact
Impact C4. (cont'd)	<p>Measure C4c. Design golf course to accept recycled water. (Same as Measure C1d.)</p> <p>Measure C4d. Use recycled water for golf course irrigation. (Same as Measure C1e.)</p>			
Impact C5. Possible groundwater degradation through disturbance of existing wells or percolation.	<p>Measure C5a. Identify and remedy conditions at abandoned wells, if necessary.</p> <p>Measure C5b. Prepare a Golf Course Management Plan.</p>	LS	LS	
Impact C6. Construction impacts associated with provision of a recycled water pipeline.	<p>Measure C6a. Implement Pleasanton's standard construction mitigation measures.</p> <p>Measure C6b. Upon completion of subsequent environmental review for offsite segments of the recycled water line, adopt and implement specific mitigation measures.</p>	LS	LS	
Impact C7. Potential downstream impacts on water quality if recycled water is used for irrigation of the golf course and landscaped public areas.	<p>Measure C7. Prepare a Golf Course Management Plan. (Same as Measure C5b.)</p>	LS	LS	

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		"✓" if
		Cooperative Plan	Preferred Plan	Cumulative Impact
D. INFRASTRUCTURE SYSTEMS: WASTEWATER				
Impact D1. Potential interference with existing onsite sewer main during construction.	Measure D1a. Relocate main and pump station, if necessary for this project, to a site providing satisfactory access, with no disruption of existing flows during the relocation process.  Measure D1b. Follow best available practices for either abandoning the main and pump station in place or removing them in order to minimize health hazards.	LS	LS	
Impact D2. Cumulative increase in demand for treatment capacity.	Measure D2a. Require payment of connection fees.  Measure D2b. Phase development so that demand for wastewater treatment capacity does not exceed capacity available to the City of Pleasanton.  Measure D2c. Secure reservations/guarantees for capacity to ensure availability as development occurs.  Measure D2d. Require water conservation measures. (Same as Measure C1b.)	ND	ND	✓



Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact D3. Increase in demand for export capacity.	<p>Measure D3a. Require payment of connection fees. <i>(Same as Measure D2a.)</i></p> <p>Measure D3b. Phase development so that demand for wastewater disposal capacity does not exceed capacity available to the City of Pleasanton. <i>(Same as Measure D2b, except for export capacity instead of treatment capacity.)</i></p> <p>Measure D3c. Secure reservations/guarantees for capacity to ensure availability as development occurs. <i>(Same as Measure D2c.)</i></p> <p>Measure D3d. Require water conservation measures.</p> <p>Measure D3e. Plan and build the onsite wastewater collection system to minimize infiltration and inflow.</p> <p>Measure D3f. If export capacity becomes unavailable as the project develops, undertake measures to offset the project’s demand for export capacity.</p>			

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if
		Cooperative Plan	Preferred Plan	Cumulative Impact
E. PUBLIC SERVICES: EDUCATION				
Impact E1. Potential increase in elementary school enrollment exceeding ideal school district capacity in existing schools.	Measure E1a. Development in the project area shall pay school impact fees to the School District at the same rate as other properties in the City of Pleasanton, subject to agreement between the School District and Master Developer giving consideration to the designation and acquisition of a school site.  Measure E1b. Project sponsor shall seek agreement with PUSD, and City shall urge PUSD, to build a new elementary school that provides, at a minimum, the core facilities and classrooms required to serve a student population of 300 so that project elementary students do not cause enrollment at then-existing elementary schools to exceed their ideal capacities, using the site dedicated by the project and the impact fees paid as development occurs.	ND <sup>†</sup>	ND <sup>†</sup>	✓
Impact E2. Introduction of a critical mass of school-aged population into a neighborhood with no existing elementary school.	Measure E2a. Prior to adoption of the development agreement for the area, reserve a five-to-ten acre site for an elementary school.	ND	ND	



Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		"✓" if
		Cooperative Plan	Preferred Plan	Cumulative Impact
E. PUBLIC SERVICES: EDUCATION				
Impact E2. (cont'd)	<p>Measure E2b. In order to facilitate early development of the school, grant the school site to the Pleasanton Unified School District, when requested by the District, in graded, developable condition, in exchange for a credit toward future school fees.</p> <p>Measure E2c. Project sponsor shall seek agreement with PUSD, and City shall urge PUSD, to build a new elementary school that provides, at a minimum, the core facilities and classrooms required to serve a student population of 300 so that so the school is operational when the number of elementary school students living in the project area reaches 300, using the site dedicated by the project and the impact fees paid as development occurs.</p> <p>Measure E2d. Build infrastructure to serve the school site in a timely manner.</p>			

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact E3. Cumulative increase in middle school enrollment exceeding ideal school district capacity in existing schools.	Measure E3. Development in the project area shall pay school impact fees to the School District at the same rate as other properties in the City of Pleasanton, subject to agreement between the School District and Master Developer giving consideration to the designation and acquisition of a school site. <i>(Same as Measure E1.)</i>	LS	LS	✓
Impact E4. Potential for safety, noise, and/or attendance area conflicts related to location of school facilities.	Measure E4a. As a condition of the development agreement for the area, require the developer to reach agreement with the Pleasanton Unified School District on the location of the elementary school site and the protective features that must be incorporated into the development of the site, prior to the commencement of any development on the site.  Measure E4b. Project sponsor shall provide convenient and safe routes for school children throughout the project area to both the elementary school site and the PUSD Middle School as the project develops.	LS	LS	



Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		"✓" if
		Cooperative Plan	Preferred Plan	Cumulative Impact
F. PUBLIC SERVICES: POLICE				
No significant impacts.				
G. PUBLIC SERVICES: FIRE PROTECTION				
Impact G1. Potential development beyond five-minute emergency fire department response time area from existing fire stations.	Measure G1a: Phase construction so that relocated fire station is operational before development occurs outside the five-minute response time area.  Measure G1b: Require that all residences or other buildings outside the five-minute response time area be equipped with fire sprinklers.	LS	LS	
Impact G2. Cumulative increase in demand for fire protection services, leading to increase in the area exposed to emergency response times exceeding five minutes.	Measure G2a: Equip all habitable structures larger than 500 square feet with automatic sprinklers. <i>(Same as Measure G1b.)</i>  Measure G2b: Require that all of the roads into and within the project be available for public access; that is, no gates should be installed to restrict traffic flows.  Measure G2c: Locate the fire station site on a street that has a direct connection to Sunol Boulevard.	LS	LS	✓

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
H. PUBLIC SERVICES: PARKS AND COMMUNITY SERVICES				
Impact H1. Potential for interference with the location of a 35-acre community park on the Bernal property.	Measure H1. Provide an option for the City to expand the 20-acre community park to up to 35 acres, as provided by the General Plan, in a contiguous, appropriately-configured parcel.	LS	LS	
Impact H2. Potential for inappropriately-located, -sized, or -configured neighborhood parks.	Measure H2a. Assure that neighborhood parks, or neighborhood park-type improvements in community parks, are located within one-half mile of all residential areas.  Measure H2b. Provide neighborhood parks of satisfactory size and shape unless the City finds that alternative, smaller parks satisfy its requirements for meeting neighborhood park needs.	LS	LS	
Impact H3. Potential incompatibility with regional trail.	Measure H3. Prior to approval, refine the specific plan to minimize conflicts between residential development and trails.	LS	n.a.	
I. LIBRARY FACILITIES				
No significant impacts.				



Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		"✓" if
		Cooperative Plan	Preferred Plan	Cumulative Impact
J. TRANSPORTATION				
Impact J1a. Project traffic would contribute to traffic volumes at the I-680 northbound offramp/Bernal Avenue intersection, resulting in LOS E and F during the AM and PM peak hours, respectively.	Measure J1a. Improve the I-680 northbound offramp/Bernal Avenue intersection to provide for two right-turn lanes from Bernal Avenue to the northbound onramp when traffic turning right from Bernal onto the northbound ramp exceeds 1,550 vehicles per hour.	LS	LS	
Impact J1b. Project traffic would contribute to traffic volumes on Bernal Avenue through the Pleasanton Avenue intersection, potentially inhibiting access from Pleasanton Avenue to Bernal Avenue.	Measure J1b. Signalize the existing Pleasanton Avenue/Bernal Avenue intersection and coordinate the signal operations with the other signals on Bernal Avenue.	LS	LS	
Impact J2. Project traffic would contribute to traffic volumes at the I-680 northbound onramp and southbound off-ramp, contributing to unacceptable ramp service levels during the AM and PM peak hours.	Measure J2a. Improve the I-680 northbound onramp at Bernal Avenue from one lane to two lanes, subject to a reimbursement agreement with the City of Pleasanton; if the City has sufficient funds available when the improvement is needed, then the project sponsor may fund only the project's fair share of the improvement.	LS	LS	

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact J2. (cont'd)	Measure J2b. Improve the I-680 southbound offramp when traffic volume on the ramp exceeds 1,440 vehicles per hour per lane or the operation of the I-680/Bernal Avenue intersection reaches LOS E, subject to a reimbursement agreement with the City of Pleasanton; if the City has sufficient funds available when the improvement is needed, then the project sponsor may fund only the project's fair share of the improvement.			
Impact J3. Project traffic would contribute to freeway traffic volumes that exceed acceptable levels on the regional transportation system.	Measure J3. Require the project sponsor to pay regional transportation impact fees, when such fees are adopted by the Tri-Valley Council.	S	S	
Impact J4a. Traffic levels would exceed residential street capacity on the West Parcel access road from Bernal Avenue south through the northernmost residential subdivision.	Measure J4a. Design residential development on the West Parcel so that it does not have direct driveway access onto streets that have traffic volume greater than 3,000 vehicles per day.	LS	LS	
Impact J4b. Traffic levels would exceed residential street capacity on neighborhood streets in the Central Parcel.	Measure J4b. Design residential development on the Central Parcel so that it does not have direct driveway access onto streets that have traffic volume greater than 3,000 vehicles per day. <i>(Not required if Measure J5c is implemented.)</i>	n.a.	LS	



Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact J4c. Traffic levels would exceed residential street capacity on neighborhood streets in the East Parcel.	Measure J4c. Design residential development on the East Parcel so that it does not front directly onto Junipero Street between the Union Pacific railroad tracks and Case Avenue.	n.a.	LS	
Impact J5a. The signalized access to/from Bernal Avenue could conflict with fairgrounds access and through traffic on Bernal Avenue.	Measure J5a. Coordinate the traffic signal installations along Bernal Avenue with fairgrounds personnel. Provide traffic signal interconnect between all signals on Bernal Avenue to minimize delay to through traffic on Bernal Avenue.	LS	LS	
Impact J5b. Existing mature trees within the Bernal Avenue median could limit sight distances at the signalized access to/from Bernal Avenue and could limit the design of left-turn access to the Central Parcel.	Measure J5b. Design the signalized access points on Bernal Avenue so as to maximize sight distance and minimize damage to the median trees.	LS	LS	
Impact J5c. Vehicle circulation may be compromised around the Village Green Loop.	Measure J5c. Construct the “Revised Preferred Plan,” which improves circulation around the Village Green Loop, adds a signalized intersection access to Bernal Avenue, and adds an internal connector road between the Pleasanton Avenue Extension and the Mid Access Road.	n.a.	LS	

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
<p><b>Impact J5d.</b>  A circulation pattern providing only one westbound egress from the commercial area of the site (at the Valley Avenue/ Bernal Avenue intersection) may inhibit traffic egress from the project site if that location is obstructed as a result of congestion or traffic incidents.</p>	<p><b>Measure J5d.</b>  Construct the “Revised Preferred Plan,” which improves circulation around the Village Green Loop, adds a signalized intersection access to Bernal Avenue, and adds an internal connector road between the Pleasanton Avenue Extension and the Mid Access Road.  <i>(Same as Measure J5c.)</i></p>	n.a.	LS	
<p><b>Impact J5e.</b>  Roundabouts in the circulation plan, if not properly designed, could cause driver confusion with respect to right-of-way and cause adverse effects on traffic safety, emergency vehicle access/response times, transit bus circulation, and delivery vehicle circulation.</p>	<p><b>Measure J5e.</b>  Design the traffic roundabouts according to the recommended ITE practices and accommodate traffic flows at 15 to 20 mph. Place “Yield” signs at the approaches to the roundabouts and provide clearly marked pedestrian crosswalks.</p>	n.a.	LS	
<p><b>Impact J5f.</b>  Street cross-sections for some road segments on the West Parcel are inconsistent with circulation needs.</p>	<p><b>Measure J5f.</b>  Design street cross-sections for the commercial/civic/residential component of the West Parcel to conform to connector road standards rather than neighborhood street standards.</p>	n.a.	LS	



Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact J6. Major fairgrounds events that draw a large attendance may cause shortages of onstreet parking within the project site, resulting in a significant parking impact.	Measure J6. Implement parking restrictions in areas of the project that may be affected by fairgrounds parking overflow.	LS	LS	
Impact J7a. Existing and planned bike lanes in the vicinity of the project site may be affected by site development resulting in significant project impacts.	Measure J7a(1). Maintain a Class I bike lane on Bernal Avenue along the project site frontage.  Measure J7a(2). Provide the necessary traffic controls to maintain safe bicycle and pedestrian circulation along Bernal Avenue through the I-680 interchange area.	LS	LS	
Impact J7b. Development of any Central or East Parcel residential use that occurs prior to the proposed grade separation would create the potential for pedestrian conflicts, especially involving school children, with the Union Pacific railroad tracks.	Measure J7b. If residential development occurs on the Central or East Parcel before the grade separation between Valley Avenue (Cooperative Plan) or Junipero Street (Preferred Plan) and the UPRR tracks is in place, construct fencing along the Union Pacific railroad tracks through the project site to reduce the likelihood that school children will cross the tracks to get to the existing and proposed schools along Case Avenue.	LS	LS	

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
<p><b>Impact J7c.</b> Street design that includes roundabouts and traffic circles would create the potential for bike and pedestrian conflicts with motor vehicles.</p>	<p><b>Measure J7c(1).</b> Design the traffic roundabouts according to the recommended ITE practices and accommodate traffic flows at 15 to 20 mph. Place “Yield” signs at the approaches to the roundabouts and provide clearly marked pedestrian crosswalks. <i>(Same as Measure J5e.)</i></p> <p><b>Measure J7c(2).</b> Design traffic circles to have appropriate dimensions and traffic control signage for bicycle safety.</p>	n.a.	LS	
<p><b>Impact J7d.</b> Potential for conflicts between free-flowing vehicular traffic at the Bernal Avenue ramps to/from I-680 and bicycle/pedestrian traffic on the Bernal Avenue bike lane/sidewalk.</p>	<p><b>Measure J7d(1).</b> Direct pedestrian movements to one side of Bernal Avenue only to minimize crossing of freeway ramps.</p> <p><b>Measure J7d(2).</b> Construct dual right-turn lane freeway ramps to include a signalized “demand-activated” crossing for pedestrians and bicyclists.</p> <p><b>Measure J7d(3).</b> During interchange redesign, consider designs that direct bicycle traffic to use sidewalks through the Bernal Avenue interchange.</p>	LS	LS	



Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		"✓" if
		Cooperative Plan	Preferred Plan	Cumulative Impact
Impact J8. Construction-related vehicles may impede normal traffic movements and damage existing roads.	Measure J8. Prior to beginning grading or construction on the site, the applicant shall prepare for approval by the City of Pleasanton a Construction Phasing and Management Plan.	LS	LS	
Impact J9. Project traffic would contribute to cumulative traffic growth on the road network and freeway ramps in the vicinity of the project site.	Measure J9a. Require the project sponsor to make a fair share contribution to the City road network in the vicinity of the project to its ultimate design by payment of City traffic impact fees.  Measure J9b. Require the project sponsor to develop and implement a Transportation System Management Plan (TSMP) in accordance with the City of Pleasanton TSM ordinance.	LS	LS	✓
Impact J10. Project traffic would contribute to cumulative traffic growth on the regional transportation system.	Measure J10. Require the project sponsor to make a fair share contribution to regional transportation improvements by paying impact fees, when such fees are adopted by the Tri-Valley Council. (Same as Measure J3.)	S	S	✓

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact		
		Cooperative Plan	Preferred Plan			
K. AIR QUALITY						
Impact K1. Construction activities would generate dust and PM-10, creating the potential for nuisance.	Measure K1. Prepare and implement a dust control plan for the construction period, which would control dust during all phases of construction, to be reviewed and approved by the City Public Works Department prior to development activity on the site.	S (temporary, during mass site grading); LS for subsequent site-specific grading	S (temporary, during mass site grading); LS for subsequent site-specific grading			
Impact K2. The project would contribute to regional emissions well in excess of the thresholds of significance recommended by the Bay Area Air Quality Management District.	Measure K2a. Implement measures to reduce vehicular travel.  Measure K2b. Implement measures to reduce emissions related to residential land uses.	S	S			
L. NOISE						
If standard for exterior noise level in residential areas is:		60 dB	65 dB	60 dB	65 dB	
Impact L1a(1). Proposed residential development on the West Parcel north of the I-680 overcrossing of the Pleasanton Avenue extension would be exposed to a $L_{dn}$ of greater than 60 dB.	Measure L1a(1). If the standard for a $L_{dn}$ not in excess of 60 dB is applied: Increase the height or shift the location of the proposed berm/soundwall combinations.  Measure L1a(3) also applies.	LS	n.a.	LS	n.a.	
Impact L1a(2). Some proposed residential development on the West Parcel north of the I-680 overcrossing of the Pleasanton Avenue extension would be exposed to a $L_{dn}$ of greater than 65 dB.	Measure L1a(2). If the standard for a $L_{dn}$ not in excess of 65 dB is applied: Increase the height or shift the location of the proposed soundwall at the I-680/Bernal Avenue interchange.	S	LS	S	LS	

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation				“✓” if Cumulative Impact
		Cooperative Plan		Preferred Plan		
Impact L1a(2). (cont'd)	Measure L1a(3). <i>If mitigations that would reduce exterior noise levels to comply with the adopted standard (60 dB or 65 dB) cannot feasibly be implemented:</i> Require detailed project-specific noise studies for each development project in an area where the standard is exceeded to characterize noise conditions and to identify the noise reduction features that must be incorporated to achieve acceptable interior noise levels, and require incorporation of those features into construction.					
Impact L1b. Proposed residential development on the West Parcel south of the I-680 overcrossing of the Pleasanton Avenue extension would be exposed to a $L_{dn}$ of greater than 60 dB.	Measure L1b. <i>If the standard for a <math>L_{dn}</math> not in excess of 60 dB is applied:</i> Require detailed project-specific noise studies for each development project in an area where the standard is exceeded to characterize noise conditions and to identify the noise reduction features that must be incorporated to achieve acceptable interior noise levels, and require incorporation of those features into construction. <i>(Same as Measure L1a(3).)</i>	S (NM)	*	S (NM)	*	
Impact L1c(1). Proposed residential development on the Central Parcel south of the Village Center would be exposed to a $L_{dn}$ of greater than 60 dB.	Measure L1c(1). <i>If the standard for a <math>L_{dn}</math> not in excess of 60 dB is applied:</i> Increase the height and extend the length of the proposed landscaped berm.  <i>Measure L1c(3) also applies.</i>	LS	n.a.	LS	n.a.	



Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation				"✓" if
		Cooperative Plan		Preferred Plan		Cumulative Impact
Impact L1c(2). Some proposed residential development on the Central Parcel south of the Village Center would be exposed to a $L_{dn}$ of greater than 65 dB.	Measure L1c(2). <i>If the standard for a <math>L_{dn}</math> not in excess of 65 dB is applied:</i> The landscaped berm located midway between the freeway and the residential area nearest to the freeway could be reduced in height to 13 feet, but would have to be extended northerly of the proposed ending point.  Measure L1c(3). <i>If mitigations that would reduce exterior noise levels to comply with the adopted standard (60 dB or 65 dB) cannot feasibly be implemented:</i> Require detailed project-specific noise studies for each development project in an area where the standard is exceeded to characterize noise conditions and to identify the noise reduction features that must be incorporated to achieve acceptable interior noise levels, and require incorporation of those features into construction. <i>(Same as Measure L1a(3).)</i>	S	LS	S	LS	
Impact L1d. Proposed single-family residential development on the Central Parcel between Bernal Avenue and the south end of the Village Center would be exposed to a $L_{dn}$ of greater than 60 dB.	Measure L1d(1). <i>If the standard for a <math>L_{dn}</math> not in excess of 60 dB is applied:</i> Increase the height and extend the length of the noise mitigation feature proposed for that portion of the Central Parcel south of the Village Green.	LS	LS	LS	LS	

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact L1d. (cont'd)	<p>Measure L1d(2). <i>If the standard for a <math>L_{dn}</math> not in excess of 65 dB is applied:</i> Extend the length of the noise mitigation feature proposed for that portion of the Central Parcel south of the Village Green.</p> <p>Measure L1d(3). <i>If mitigations that would reduce exterior noise levels to comply with the adopted standard (60 dB or 65 dB) cannot feasibly be implemented:</i> Require detailed project-specific noise studies for each development project in an area where the standard is exceeded to characterize noise conditions and to identify the noise reduction features that must be incorporated to achieve acceptable interior noise levels, and require incorporation of those features into construction. (Same as Measure L1a(3).)</p>			
Impact L2. Proposed commercial/office land uses within the project area would be exposed to exterior noise levels in excess of a $L_{dn}$ of 70 dB.	Measure L2. Incorporate sound-reducing building components in commercial and office portions of the project that are exposed to exterior noise levels exceeding 70 dB $L_{dn}$ .	LS	LS	

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact L3a. Some portions of the proposed golf course would be exposed to noise levels in excess of a $L_{dn}$ of 65 dB.	Measure L3a. Locate the noise mitigation feature on the Central Parcel south of the Village Green adjacent to the freeway and construct it to a height that will reduce noise exposure on the golf course to acceptable levels.	LS	LS	
Impact L3b. Portions of the proposed community park (on the Central Parcel) adjacent to Bernal Avenue would be exposed to noise levels in excess of a $L_{dn}$ of 65 dB.	Measure L3b. Design the community park so that uses that benefit most from noise levels in the “normally acceptable” range are located in the portions of the park where noise exposure is lower than 65 dB.	LS	LS	
Impact L3c. Portions of the proposed neighborhood park on the West Parcel adjacent to Bernal Avenue would be exposed to noise levels in excess of a $L_{dn}$ of 65 dB.	Measure L3c. Design the neighborhood park so that uses that benefit most from noise levels in the “normally acceptable” range are located in the portions of the park where noise exposure is lower than 65 dB.	LS	LS	
Impact L3d. The neighborhood park and open space area on the East Parcel would be exposed to noise levels in excess of a $L_{dn}$ of 65 dB.	Measure L3d. None.	S (NM)	S (NM)	
Impact L4. Noise levels generated by the proposed fire station would be significant at existing noise sensitive receptors.	Measure L4. Locate the fire station farther from, or in an area not surrounded by, residential or other noise sensitive uses.	LS	LS	



Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact L5. Outdoor noise levels along railroad tracks would exceed the threshold at which controls are required to reduce interior noise levels.	Measure L5. Require a combination of soundwall and construction techniques, such as sound rated windows and walls, in residential units near the railway that are (or would be, with future rail service) exposed to exterior maximum train passby noise levels of 75 dBA or more.	LS	LS	
Impact L6. Construction activity would raise noise levels in selected residential areas to unacceptable levels.	Measure L6a. Limit construction activities as appropriate to each development unit.  Measure L6b: Require conformance with other standard Pleasanton construction noise mitigation regulations and procedures.	LS	LS	
<b>M. CULTURAL RESOURCES</b>				
Impact M1. Potential for future development of the study area to disturb cultural resources not yet identified.	Measure M1a. Prior to approval of any grading or development plans, including infrastructure plans, complete an intensive cultural resources survey of the study area.  Measure M1b. In the portions of the project area not currently known to contain archeological resources, grading and site preparation activities will be subject to monitoring by a qualified archeologist.	ND	ND	

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact M1 (cont'd)	Measure M1c. If archaeological resources are identified during mass site grading and preparation activities, the archaeologist shall recommend actions to identify and protect potential resources for implementation during subsequent site-specific grading.			
Impact M2. Potential for future development of the study area to disturb identified sites or resources.	Measure M2. Assure the protection of important cultural resources during site planning and development.	ND	ND	
Impact M3. Potential for future development to be located on identified sites, which could preclude future evaluation of known resources.	Measure M3. Document the archeological findings at the site in a report meeting professional standards, and file the report with appropriate State and City offices.	LS	LS	
<b>N. VISUAL RESOURCES</b>				
Impact N1. Project development, including barriers to mitigate freeway noise, would reduce visibility into and beyond the site and diminish the “green vista” currently available from I-680 northbound and southbound through the site.	Measure N1a. Avoid placement of opaque noise barriers along I-680. <i>If noise barriers are provided along I-680, then:</i> Measure N1b. Plan for noise mitigation in a manner that takes account of the visual consequences of noise barriers on views of the site from the outside and on views from within the project.	S	S	

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
<p><b>Impact N2.</b> The Valley Avenue overcrossing of the UPRR tracks in the Cooperative Plan would introduce a large obstruction into the view visible from a key point northbound along the scenic I-680 corridor; under the Preferred Plan, it would introduce an out-of-scale infrastructure element into a small-scale residential environment.</p>	<p><b>Measure N2.</b> The Valley Avenue crossing of the Union Pacific railroad should be constructed as an undercrossing to avoid impairing views from I-680 or introducing an out-of-scale bridge structure into a residential development context.</p> <p>(1) For the Cooperative Plan, choose the Valley Avenue alignment shown for the Preferred Plan (because a rail undercrossing next to the freeway is considered physically infeasible).</p> <p>(2) Implement the Valley Avenue/UPRR grade separation as an undercrossing to avoid introducing a visually-prominent infrastructure element into a residential area.</p>	LS	LS	
<p><b>Impact N3.</b> Development structures and fencing would reduce visibility into and beyond the site and diminish the availability of distant views from Bernal Avenue.</p>	<p><b>Measure N3a.</b> Configure land use on the site so as to provide substantial open space frontage along Bernal Avenue.</p> <p><b>Measure N3b.</b> Site of buildings along the Bernal Avenue right-of-way in a manner that allows views into and beyond the site.</p>	S	LS	



Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact N3. (cont'd)	Measure N3c. Where security fencing is needed along Bernal Avenue (primarily along the golf course, to control access, and along active recreational areas, for public safety), utilize a type of fencing that allows for views into and through the site.			
Impact N4. Proposed grading of the knoll would adversely affect its visual quality.	Measure N4. Redesign site plan to avoid major grading on the knoll.	LS	n.a.	
Impact N5. A significant number of major trees on the site would be lost as a result of site grading and improvements to Bernal Avenue.	Measure N5a. Development shall preserve as a visual resource any heritage trees on the site, the riparian vegetation along the Arroyo and in the finger tributary, the trees at the site of the old farmstead on the West Parcel, and the trees on the knoll and in the willow grove on the East Parcel.  Measure N5b. Reconstruction of Bernal Avenue shall maintain significant existing street trees where possible. If any trees must be removed to accommodate reconstruction of the street, they shall be replaced according to a plan for beautification of Bernal Avenue consistent with the Community Character Element of the Pleasanton General Plan.	LS	LS	

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact N5 (cont'd)	Measure N5c. The site should be landscaped in a manner that replaces the tree features lost as a consequence of development.			
Impact N6. Development would significantly increase night lighting at the project site.	Measure N6. A section on lighting design, including specifications to avoid excessive light or glare, shall be included in the final design guidelines for the specific plan.	LS	LS	
<b>O. BIOLOGY</b>				
Impact O1. Potential for adverse effects on the riparian habitat of the Arroyo de la Laguna.	Measure O1a. Require that the specific plan provide setbacks of at least 100 feet from the existing centerline of the Arroyo de la Laguna or at least 10 feet from the outermost drip line of existing trees along the main channel of the Arroyo, whichever is greater.  Measure O1b. Require consultation with California Department of Fish and Game in any areas subject to their jurisdiction prior to any proposed encroachment into the designated corridor, or consultation with the U.S. Army Corps of Engineers prior to any activity that would occur within the banks of the Arroyo channel.	LS	LS	

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact O2. Potential for adverse effects on the riparian habitat of the dry channel east of the Arroyo.	Measure O2a. Modify the land use plan to avoid filling the dry channel or disturbing any area within 50 feet of the centerline of the channel, <i>or</i>  Measure O2b. Replace affected habitat elsewhere on the site, <i>or</i>  Measure O2c. Conform to the requirements of a Streambed Alteration Agreement or other requirements of other jurisdictional agencies.	LS	LS	
Impact O3. Potential for removal of heritage trees located in the study area when development occurs.	Measure O3. Prior to the approval of a grading plan for the site, require the preparation and approval of a Master Landscape Plan and Tree Preservation Plan.	S; LS if Measures N4a – N4d are also implemented	S; LS if Measures N4a – N4d are also implemented	
Impact O4. Potential adverse effects on wetlands as a result of future development.	Measure O4a. Prior to the approval of a final grading plan, verify and delineate the locations of wetlands on the site.  Measure O4b. If wetlands that would be adversely affected by the project are delineated on the site as a result of Measure O4a, require the preparation of a mitigation plan, including an avoidance alternative, that will meet federal and state requirements prior to the approval of a final grading plan.	LS	LS	



Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if Cumulative Impact
		Cooperative Plan	Preferred Plan	
Impact O5. Potential adverse effects of golf course fertilizers, herbicides and other chemicals on animal species.	Measure O5. Prepare a Golf Course Management Plan. (Same as Measure C4b.)	LS	LS	
Impact O6. Potential adverse effects of site development on raptor nesting.	Measure O6a. Prior to development-related activity on the site, confirm presence of the nest.  <i>If any nest is present, then Measure O6b applies:</i> Measure O6b. Restrict development in the vicinity of the red-tailed hawk nest.	LS	LS	
<b>P. PUBLIC HEALTH AND SAFETY</b>				
Impact P1. Introduction of residents and workers into an area affected by existing contamination (if any).	Measure P1a. Determine existing contamination (if any).  Measure P1b. Remediate hazardous conditions (if found).  Measure P1c. If hazardous conditions cannot be remediated, refine land use plan to avoid adverse effects of contamination (if any).	LS	LS	
Impact P2. Potential adverse effects on residents and workers of possible future soil and water contamination.	Measure P2. Prepare a Golf Course Management Plan. (Same as Measure C4b.)	LS	LS	

Impact Summary	Principal Mitigation(s)	Impact Level of Significance after Mitigation		“✓” if
		Cooperative Plan	Preferred Plan	Cumulative Impact
Q. GEOLOGY, SOILS, AND SEISMIC SAFETY				
Impact Q1. Introduction of structures and population into an area in which the likelihood of impacts from seismic events is high.	Q1: None.	S (NM)	S (NM)	
Impact Q2. Material transfer requirements of the grading program result in potential impacts on traffic and air quality during construction.	Measure Q2a: Prior to the issuance of any building, grading, or demolition permit, the applicant shall prepare for approval by the City of Pleasanton a Construction Phasing and Management Plan. (Same as Measure J8.)  Measure Q2b: In the specific plan and as a condition of approval for development, require dust control during all phases of construction. (Same as Measure K1.)	LS	LS	
R. ENERGY				
No significant impacts.				

Key: S: significant (C): contributes to cumulative impact  
 LS: less than significant n.a.: impact does not apply to this alternative  
 \* no mitigation required ND: not determinable  
 † Less than significant before mitigation, but contributes to cumulatively significant impact.  
 NM: no mitigation possible (beyond policies, programs, and other regulations already in place).

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## CHAPTER 2

### PROJECT DESCRIPTION

#### A. INTRODUCTION

This environmental impact report (EIR) addresses a series of actions affecting a study area of roughly 596 acres located generally in southwestern Pleasanton. Figure 1 (facing page) shows the EIR study area and its regional context. Figure 2 (p. 2) shows assessor's parcels and ownerships.

The proposed actions include annexation to the City of Pleasanton of lands in six ownerships and development of approximately 508 acres owned by the San Francisco Water Department (SFWD). Figure 3 (p. 3) shows areas proposed for rezoning/rezoning and annexation. Annexation of the SFWD property to Pleasanton is subject to (among other actions) the City and SFWD having previously reached an acceptable and effective agreement on a development plan. A detailed list of proposed Pleasanton actions is presented in Part D.1.c.(1) of this chapter, which begins on p. 13. Part D.1.c.(3) lists actions that may be required by other agencies to implement the CEQA project.

This EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970, as amended, and state and local guidelines for the implementation of CEQA. Information on the proposed action is drawn from the Notice of Preparation included as Appendix A, research undertaken by the EIR consulting team, and information provided by the City of Pleasanton, the County of Alameda, and the applicant (SFWD). Chapter 2 and the setting sections of Chapter 5 draw substantially on the planning and environmental documents prepared for the Bernal Property Specific Plan, adopted by Alameda County on August 1, 1996.<sup>1</sup> A list of sources consulted in the course of EIR preparation is provided in Chapter 9.

#### B. PROJECT LOCATION AND SITE

##### 1. Location

The EIR study area is located immediately south of Bernal Avenue on both sides of I-680. The study area is within one-half mile of downtown Pleasanton; its northeastern corner lies within a quarter mile of Pleasanton City Hall. It is bordered by incorporated Pleasanton on the west, north and east sides.

##### 2. Site

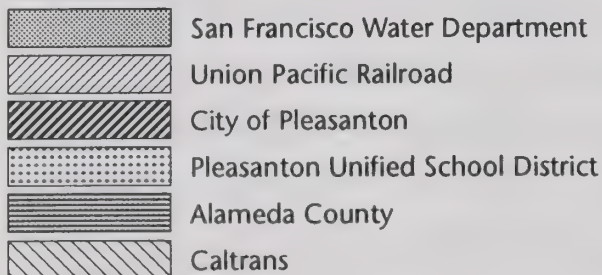
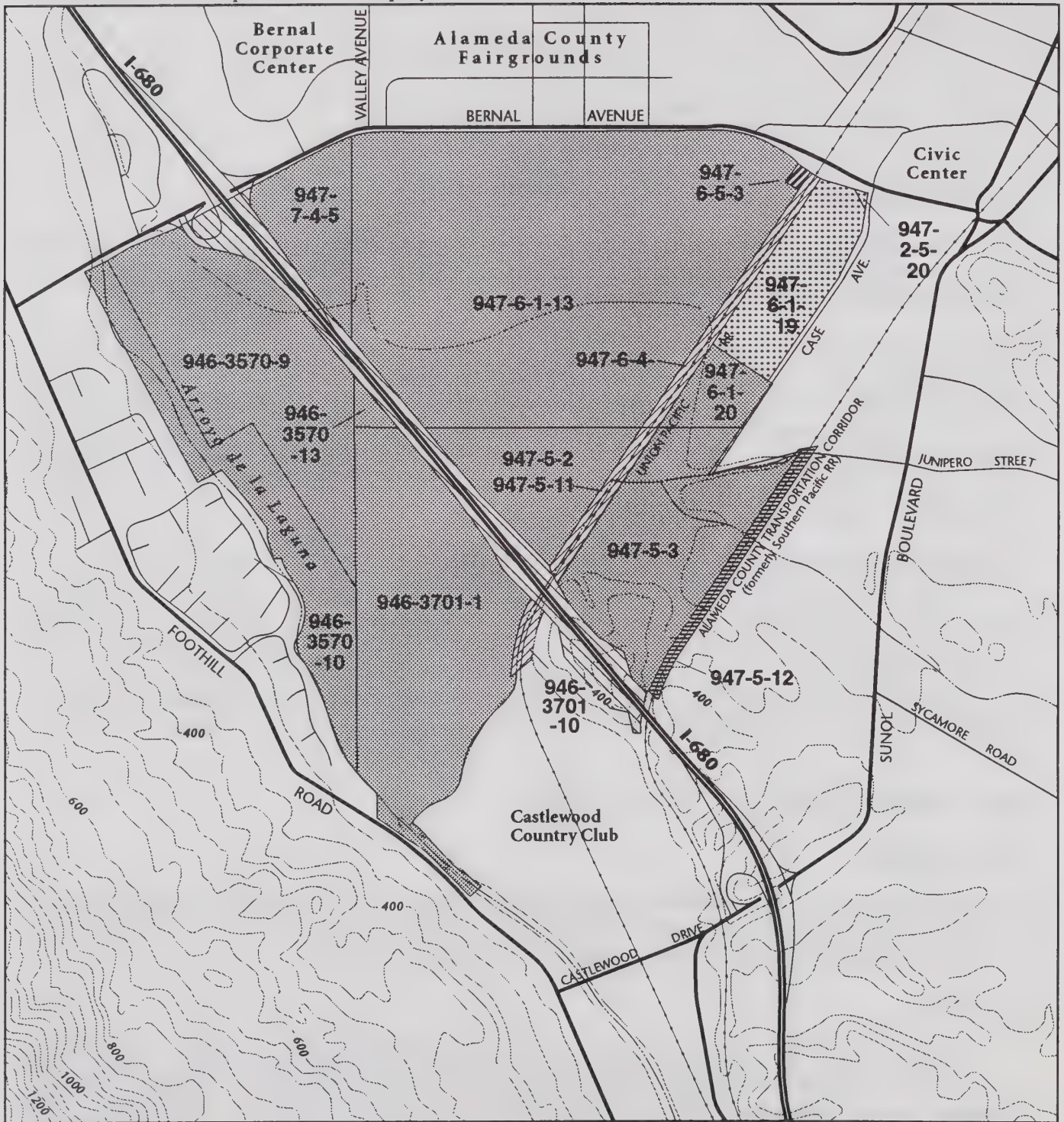
The site encompassed by the proposed specific plan occupies a roughly triangular area bounded by the Arroyo de la Laguna on the west, Bernal Avenue on the north, and the eastern edge of the Alameda County transportation corridor (formerly the Southern Pacific Railroad) on the east/southeast. The portion of the specific plan site that is owned by SFWD is divided into three subareas by transportation facilities:

- The **West Parcel** lies west of I-680, extending west to include a portion of the Arroyo de la Laguna.
- The **Central Parcel** lies between I-680 on the west and the Union Pacific (UP) railroad on the east.
- The **East Parcel** lies between the UP tracks on the west and the Alameda County transportation corridor on the east.

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<sup>1</sup> Final Environment Impact Report on *San Francisco Lands: Specific Plan for the Bernal Property* (cited below as "County EIR"), published June 1996 and certified by Alameda county August 1, 1996.





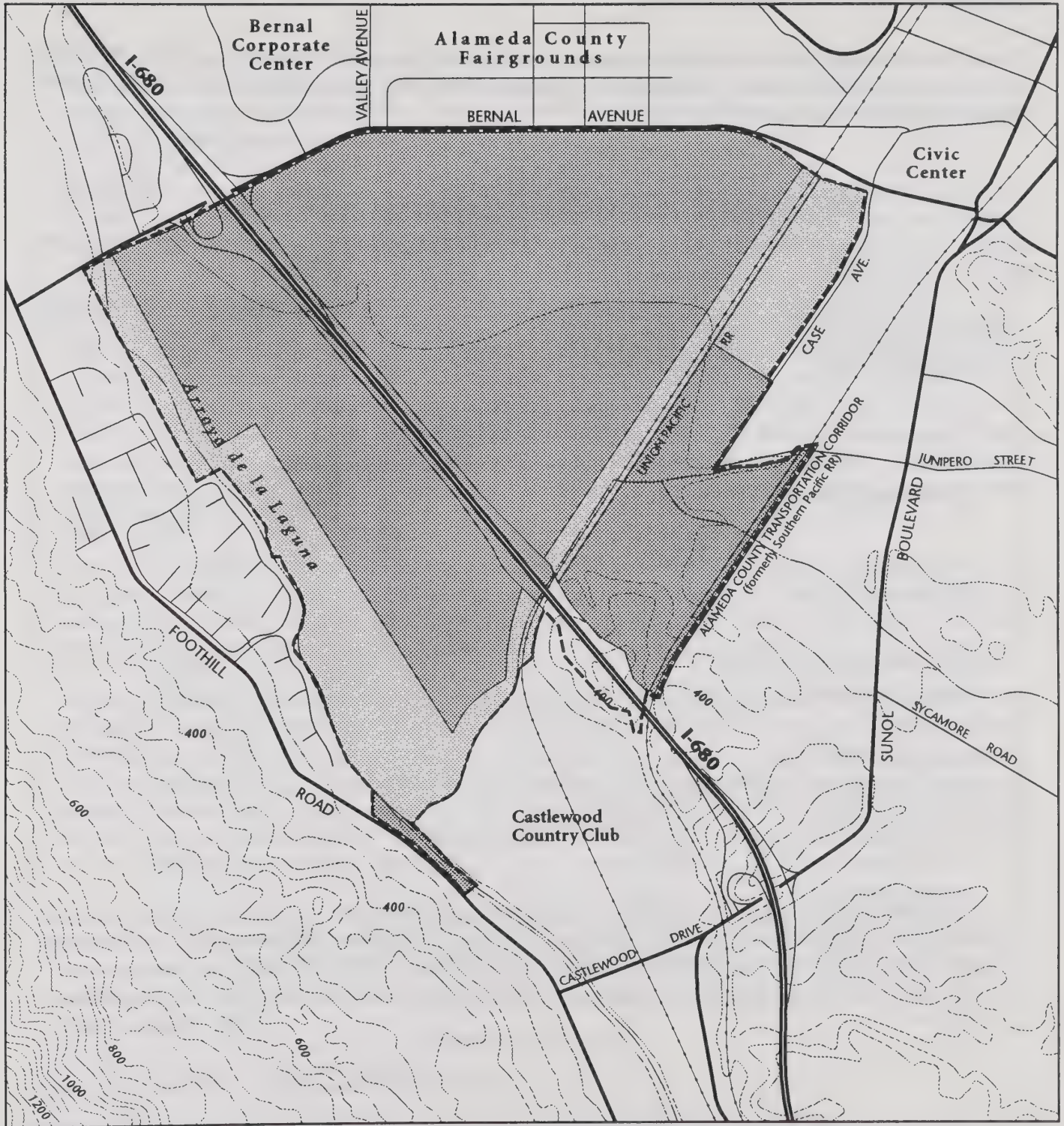
Source: County Specific Plan, Figure 1-3




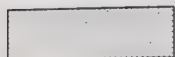
0 500 1000 2000  
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Figure 2  
**EIR Study Area Parcel  
 Numbers and Ownerships**





Source: City of Pleasanton

-  Lands proposed for prezoning
-  Lands not requiring prezoning

0 500 1000 2000  
FEET



Figure 3  
**Areas Proposed for Prezoning**

These three subareas, identified in Figure 1, are referred to in the course of this report to enable the reader to locate features and potential conditions more easily. Table 1 lists the individual properties affected by the proposed rezoning and/or annexation.

**Table 1**  
**EIR Study Area: Assessor's Parcel Numbers and Proposed Actions**

Parcel Owner (Acreage)	Assessor's Parcel Number	In Specific Plan ?	Prezoning Status:		Annexation Status:	
			Proposed	Complete	Proposed	Complete
SFWD Bernal Property (508 ±)						
West Parcel (201.3)	946-3570- 9	✓	✓		✓	
	946-3570-10	✓		✓		✓
	946-3570-13	✓	✓		✓	
Central Parcel (245.7)	946-3701- 1	✓	part	part	part	part
	947-5- 2 <sup>a</sup>	✓	part	part	part	part
	947-6- 1- 13 <sup>a</sup>	✓	part	part	part	part
	947-7- 4- 5	✓	✓		✓	
East Parcel (63.0)	947-5- 3	✓	✓		✓	
	947-6- 1- 20	✓	✓		✓	
Other Owners (88 ±)						
County of Alameda (6)	947-5-12	✓	✓		✓	
PUSD (27)	947-6- 1- 19	-		✓	✓	
Union Pacific RR <sup>b</sup>	947-5-11	✓		✓		✓
Union Pacific RR <sup>b</sup> (14)	947-6- 4- 3	✓		✓		✓
Union Pacific RR <sup>b</sup>	946-3701-10	✓		✓		✓
City of Pleasanton (1)	947-6- 5- 3	✓	✓		✓	
Caltrans (I-680) (41)	none	✓	✓		✓	

<sup>a</sup> A strip of land approximately 150 feet wide along the eastern edge of each of these SFWD properties has already been annexed to the City of Pleasanton. The UPRR tracks run within a 100-foot corridor inside this strip.<sup>2</sup>

<sup>b</sup> According to staff of the City and County of San Francisco, UPRR holds an easement to these properties which are owned by San Francisco.

Source: City of Pleasanton

## C. EVOLUTION OF THE PROJECT

### 1. Historical Background

The lands owned by the Water Department of the City and County of San Francisco (SFWD) have been the subject of a multi-year planning process.

<sup>2</sup> County EIR, p. B-10.



The site was acquired by the City and County of San Francisco in the 1930s for use as a well field to supply water to San Francisco and other municipalities. Previous uses have included agriculture (most recently cultivation of oats/oat hay) and, between 1968 and 1981, application of treated sewage effluent.<sup>3</sup> The site has never been developed for urban use.

The site lies within the area addressed by Alameda County's East County Area Plan (referred to below as ECAP).<sup>4</sup> That plan, adopted in 1994, is a portion of the Alameda County General Plan and, along with other plan elements and documents, establishes land use policies for the eastern portion of the County including the SFWD property. The ECAP incorporated land use designations in the 1986 Pleasanton Plan for those portions of the area within the Pleasanton sphere of influence.

The site also lies within Pleasanton's planning area and its sphere of influence. Pleasanton's early planning for the site contemplated industrial use.<sup>5</sup> In the early 1980s, the City began a comprehensive review of its general plan. The result of this process, the 1986 Pleasanton Plan, designated the SFWD site as "Specific Plan" that would allow for development of the site in mixed use, potentially including medium-high density residential, commercial and office, golf course, cemetery, schools, and parks, together with necessary streets and other infrastructure. The designation "Specific Plan" left the ultimate use mix to be determined through a specific plan process.

San Francisco, with assistance of Pleasanton staff, pursued the specific plan process, beginning with identification of issues (completed in 1988) and drew on this effort and the 1986 General Plan in preparing the *Concept Plan: A Proposal for Community Development* (1990). The *Concept Plan* envisioned development of a mixed-use community with a golf course.

Based on that plan, the Pleasanton City Council formed a Citizen Steering Committee and initiated a comprehensive specific plan program. The result of the Steering Committee's work was the *Preferred Plan Report* (March 1993) calling for construction of 3,000 residential units and approximately 750,000 square feet of commercial/office development, as well as numerous public facilities and amenities including a golf course. However, after receiving the report in March 1993, the City Council deferred action pending completion of a new General Plan. The new General Plan was approximately three years in preparation, and was adopted in the August 6, 1996.

The protracted planning process with the City of Pleasanton together with the adoption of ECAP prompted the City and County of San Francisco to enter into a planning process with the County of Alameda. San Francisco filed an application for development of the property, including adoption of a specific plan, with the County in September 1994. The draft specific plan and the Draft EIR on the specific plan were published in March 1995.

## **2. Agreement on the Cooperative Plan**

In September 1995, the County of Alameda, the City of Pleasanton, and the City and County of San Francisco agreed "to temporarily defer their independent initiatives for the [Bernal] property in order to review

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<sup>3</sup> County EIR, pp. 4.1-1 and 4.17-1.

<sup>4</sup> East County Area Plan (adopted May, 1994) [cited below as "ECAP"].

<sup>5</sup> *San Francisco Lands: Specific Plan for the Bernal Property*, as adopted by the Alameda County Board of Supervisors, August 1, 1996 (cited below as "County specific plan"). The description of the historical background up to footnote 4 is adapted from the specific plan text, p. 1-1 through 1-2.



the Draft Specific Plan for the Bernal Property dated March 1995 and attempt to draft refinements to this Plan that all of the parties can agree to.”<sup>6</sup>

A “Committee of Decision-Makers” was formed, comprised of two members each of the Alameda County Board of Supervisors, the Pleasanton City Council, and the San Francisco Public Utility Commission, to guide this process.<sup>7</sup> An intensive four-month effort followed that included nearly 25 meetings by the respective staffs and at least eight public hearings before the Pleasanton City Council or the Committee of Decision-Makers. The outcome of this effort was a land use development program (December 12, 1996) intended to reflect a reasonable balance of complex regional and local public interests as well as the economic objectives and limitations of the respective public agencies.

The development program was agreed upon following a critical review of (a) location, density, mix, and type of land uses acceptable for the site; (b) size, location, and funding of infrastructure and public facilities; (c) availability of public services for the planned community; (d) measures necessary to mitigate traffic and other environmental impacts of the development to preserve the quality of life in Pleasanton; and (e) other issues affecting the successful implementation of the agreed-upon land use program.

The three parties each affirmed, in January 1996, their intent to use best efforts to achieve the following:

The San Francisco Water Department would agree to allow the Bernal Project to be annexed to and developed within the City of Pleasanton, provided that Pleasanton approves a land use program consistent with the mutually-acceptable plan endorsed by the Committee of Decision-makers, and permits an economically viable project. Further, the San Francisco Water Department would commit to revise its application pending before Alameda County to reflect the modifications achieved through the cooperative planning process. Alameda County would agree to process and take action on the project based on the mutually-acceptable plan. Assuming that the City of Pleasanton adopted a specific plan, Alameda County would negotiate a good faith agreement for tax sharing preliminary to annexation of the property to the City of Pleasanton.

This agreement is the foundation of both the specific plan adopted by Alameda County and the Cooperative Plan that is Pleasanton’s project addressed by this EIR.

The text of the Cooperative Plan agreement is presented as Appendix B.

### **3. Evolution of the Preferred Plan**

After the Cooperative Plan was defined, the City of Pleasanton commissioned the formulation of a series of alternatives that were to retain the land uses and development plan contained in the Cooperative Plan while incorporating “New Urbanism” land use themes and accommodating other City-desired changes. Staff of the City and County of San Francisco were closely involved in this refinement process. The most recent of the plans generated in this collaborative process, issued in May 1996, comprises the City’s “Preferred Plan.”

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<sup>6</sup> *Cooperative Planning Process for the Bernal Property*, as adopted by the Pleasanton City Council, August 22, 1995; the Alameda County Board of Supervisors, August 29, 1995; and the San Francisco Public Utilities Commission, September 1, 1995. Presented as Exhibit A to Appendix B in the County EIR (see citation in footnote 1).

<sup>7</sup> *Cooperative Plan Recommendations, Bernal Property Development Plan*, Pleasanton, Alameda County and SFWD Staff, December 12, 1995. Presented as Appendix C in the County EIR and as Appendix B in this EIR. The description of historical background that follows is adapted from the text of the Cooperative Plan Recommendations.

Pleasanton's "Preferred Plan" was accepted by San Francisco conditionally, in view of the fact that it was a conceptual plan that, as of that time, had not been analyzed in detail. One of the provisions of the Cooperative Plan recommendations is that SFWD be provided with 250 net developable acres (200 acres residential and 50 acres commercial). Adjustments in the acreage of various land uses could affect developable acreage; therefore, the acceptability of the plan to SFWD cannot be determined until many uncertainties relating to physical and environmental aspects of development are resolved. Acceptance was premised on the understanding that many elements of the plan had not yet been worked out and revisions might be needed when the details were more closely specified. This draft EIR anticipates possible solutions to the unresolved issues and identifies potential environmental impacts associated with those options. Issues remaining unresolved include:

- Classification of major streets in residential areas. While it has been agreed to designate all of Valley Avenue on the site, and the portion of Pleasanton Avenue from Bernal to the community park, as collector streets, the designations of the remainder of Pleasanton Avenue and of Case Avenue have not been resolved. The designations are important because collector road acreage is not counted as part of the "developable" acreage of the project.
- Form of railroad grade separation for Valley Avenue at the UPRR right-of-way that will connect the Central and East Parcels. The Cooperative Plan shows an overcrossing near the I-680 freeway while the Preferred Plan shows a crossing (whether over-, under-, or at grade) more central to the site. The Pleasanton City Council, in a public meeting in January 1997, indicated its preference for an underpass at the central location. Unresolved issues associated with this choice include (1) arrangements for the temporary relocation of the railroad tracks during construction (discussed in Chapter 5, Part J (Transportation), under Construction Period Impacts) and (2) the permanent rerouting of the drainage channel that runs along the tracks (discussed in Chapter 5, Part O (Biology), under Wetlands).
- Refinement of golf course layout and design, including safety and liability issues, may affect its acreage (and therefore developable acreage).
- Refinement of open space plans may affect developable acreage.
- The Preferred Plan assumes that some areas on the site can be filled. One of these is a portion of the dry channel southeast of the Bernal Avenue bridge that is separated from the main channel of the Arroyo de la Laguna by a narrow finger of land. Options for this area are discussed in Chapter 4. The other areas are segments of the B-2 drainage channels; the location and status of these channels is discussed in Chapter 5, Part B (Drainage). In both cases, the environmental issue is biology, and the potential for impacts in both cases is discussed in Chapter 5, Part O (Biology).

The design of a circulation pattern around the Village Green under the Preferred Plan was the subject of detailed analysis that culminated in the preparation of the "Revised Preferred Plan" (February 24, 1997). That site plan addresses the site planning and circulation concerns of the Village Green area, establishing a version of Alternative 1 that mitigates the potential for backup and delay in the operation of the local circulation system. This mitigated plan is discussed in Chapter 5, Part J (Transportation).

The Cooperative Plan and the Preferred Plan are examined in similar detail in this EIR.

Both the Cooperative and the Preferred Plans allow a mix of land uses. Both would accommodate between 1,600 and 1,900 housing units. Under both plans, the main commercial area of the project would accommodate approximately 200,000 square feet of retail space and 377,000 square feet of commercial/office space, as shown in Table 2. The Preferred Plan provides for a small additional amount (5,000 square feet)



on commercial use to the West Parcel. The Preferred Plan allows a larger clubhouse (up to 40,000 sq. ft. as compared with 20,000 under the Cooperative Plan.) Both plans incorporate some flexibility between the retail and commercial/office space.

**Table 2**  
**Building Space Characteristics of the Cooperative Plan and the Preferred Plan**

	Cooperative Plan		Preferred Plan	
	Acres	Units/Sq. Ft.	Acres	Units/Sq. Ft.
Residential		1,900		1,900
Commercial:				
Retail	20	200,000 <sup>a</sup>	21	200,000
Commercial/Office	30	377,000 <sup>b</sup>	13.4	377,000
Total		577,000		577,000 <sup>c</sup>

<sup>a</sup> “Retail” is envisioned as a mix of retail, office, and community-serving uses complementary to the primary commercial function of the total 577,000 square feet of commercial space. (County specific plan development guidelines, Policy LU5, identifies some potentially appropriate uses.) This provision for commercial space is exclusive of the clubhouse facility.

<sup>b</sup> If County specific plan development guidelines (Policy LU6) applied, up to 20 percent of this space would be retail/commercial development, a guideline intended to avoid exceeding circulation system capacity.

<sup>c</sup> The Preferred Plan allows a larger golf clubhouse (40,000 square feet vs. 20,000 under the Cooperative Plan); an allowance for commercial development on the West Parcel in the amount of 5,000 square feet is also made. These two provisions are in addition to the total of 577,000 square feet given for the commercial use category.

Source: City of Pleasanton

Both plans also include other uses, including possibly other commercial and hotel development, a golf course, parks and open space, cultural facilities, and public facilities (e.g., an elementary school, potentially a fire station, and other possible public uses).

Other characteristics of the Cooperative Plan and the Preferred Plan – including transportation/circulation features; water supply; wastewater collection, treatment, and disposal; storm drainage; affordable housing; open space mitigation; and growth management – are discussed in Chapter 5, with the analysis of impacts and mitigation measures.

The land use characteristics of both plans are presented in Table 3 (p. 9). Figures 4 and 5 (pp. 31-32) depict these plans graphically.



**Table 3**  
**Land Uses Proposed for the SFWD Bernal Property under the Cooperative and Preferred Plans**

Use	Parcel	Cooperative Plan <sup>a</sup> (Acres)	Preferred Plan <sup>b</sup> (Acres)
SFWD Bernal Property, Total		508±	508±
Residential	Total	200	195.4
	Central	65	75.2
	West	91	89.0
	East	44	31.2
Village Commercial	Total	20	21
	Central	20	20
	Other	0	1
Commercial Office	Total	30	13.4
	Central	30	13.4
Civic	Total	0	14.3
	Central	0	13.3
	West	0	1.0
Other Public Uses	Total	6	11
School	East	5	10
Fire Station	East	1	1
Parks	Total	30	32.6
Village Green	Central	0	1.6
Neighborhood Park	Total	10	16
	Central	0	0
	West	5	6
	East	5	10
Community Park	Central	20	20
Other Open Space	Total	40	44.1
	Central	8 [buffers]	2.6
	West	27 [Arroyo]	27.0
	East	5 [buffers]	9.5
Roads	Total	25	8
	Central	22	6.7
	West	3	0
	East	0	1.3
Golf	Total	157	168.2
	Central	80	91.2
	West	77	77.0
	East	0	0

<sup>a</sup> Cooperative Plan acreage as shown in County Specific Plan, Table 3-2. Two variants in which the city would purchase from SFWD some lands for civic use(s) are discussed in Chapter 4. In the event of such a purchase, residential and commercial acreages would decrease by the amount of acreage purchased.

<sup>b</sup> Preferred Plan acreage from the Calthorpe Associates plan of May 1996 identified as "Alternative 5." The Preferred Plan is conceptual and is expected to be revised, as described in the text, p. 7. In view of the conceptual nature of the Preferred Plan, acreage comparisons with the Cooperative Plan should be order-of-magnitude only. The land purchase variants described for the Cooperative Plan also apply to the Preferred Plan.

#### **4. Project Sponsor's Objectives**

The Water Department, City and County of San Francisco, has provided a statement of project objectives:

To develop a quality, golf course oriented project that integrates a mixture of residential, commercial, public, and institutional uses and recreational opportunities that can be developed in an economical and financially prudent manner, that will contribute to the fiscal and economic vitality of Pleasanton and Alameda County with a development plan that will complement and enhance the surrounding neighborhoods and community. The specific development plan objectives include the following elements:

##### **Residential**

To allow for the development of a maximum of 1,900 residential units on 200 acres that will include a variety of housing types, designs, densities, and prices that will meet and respond to a range of market demands and household incomes, including affordable housing.

##### **Village Retail**

To provide for up to 200,000 square feet of retail commercial space on approximately 20 acres to serve community and neighborhood needs in a village center concept, that will provide a community, commercial and social focal point that reduces vehicle trips by fostering pedestrian access through its proximity to and integration with residential uses.

##### **Commercial/Office**

To develop up to 377,000 square feet of office and commercial uses on approximately 30 acres, designed to attract major regional and local employers by its proximity to regional transportation systems and provide local employment opportunities which can reduce regional and local traffic impacts.

##### **Golf Course**

To develop an 18-hole golf course, driving range, and clubhouse facility on approximately 150 acres, open to the general public, that provides regional and local recreation opportunities, open space, and a visual amenity for surrounding uses and the community, and opportunities for storm water management and potential use of recycled water.

##### **Recreation**

To develop a system of neighborhood and community parks that will provide active recreational opportunities and passive open space areas connected by trails, pedestrian and bicycle pathways that provide convenient linkages to the Village Center, residential neighborhoods, regional trails and the surrounding community.

##### **Public Facilities**

To provide for a neighborhood elementary school site that can serve students from the plan area and the surrounding community, a fire station site to facilitate implementation of Pleasanton's Master Fire Service Plan, zoning for child care facilities, and provision for Pleasanton's acquisition of civic property.



### Water and Wastewater

To develop a plan that ensures an adequate supply of water and wastewater treatment and reduces potable water demand through incorporation of water conservation fixtures and landscape measures and provides opportunities for use of recycled water to irrigate the golf course and public landscaped area.

### Regional Flood Control

To limit increases in development runoff through construction of an onsite storm drainage detention system and provide sufficient right-of-way within the Arroyo to allow a range of future regional flood control improvements to be implemented including alternatives that can minimize impacts to the Arroyo riparian corridor.

### Project Implementation

To obtain final and effective entitlements that will allow a financially sound project to be phased in an economical and timely fashion and enable it to respond in a flexible manner that is consistent with future market demands.

### Fiscal and Economic

To create a development plan that provides for multiple tax revenue sources for Pleasanton and Alameda County and that contributes to the fiscal and economic base of the region.

## **D. ENVIRONMENTAL ISSUES AND USES OF THIS EIR**

### **1. Purpose of EIR**

An environmental impact report is a public information document that identifies potential significant environmental effects of a proposed project and recommends measures that can be taken to mitigate those impacts.

#### **a. Applicability of the California Environmental Quality Act**

An environmental impact report (EIR) is required under the provisions of the California Environmental Quality Act (CEQA), 1970, for all proposed projects that require discretionary action by a governmental body and that could potentially have significant effects on the environment.

The basic purposes of this law are described in the State CEQA Guidelines (§15002), as follows:

- (1) Inform governmental decisionmakers and the public about the potential significant environmental effects of proposed activities.
- (2) Identify ways that environmental damage can be avoided or significantly reduced.
- (3) Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.



- (4) Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

According to the State CEQA Guidelines (§15378), a project is the whole of an action which has a potential for resulting in a direct or ultimate physical change in the environment. A project is defined by CEQA as any of the following:

- (1) An activity directly undertaken by any public agency including but not limited to public works construction and related activities, clearing or grading of land, improvements to existing public structures, enactment and amendment of zoning ordinances, and the adoption and amendment of local general plans or elements thereof pursuant to Government Code Sections 65100-65700.
- (2) An activity undertaken by a person which is supported in whole or in part through public agency contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
- (3) An activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

Discretionary actions are defined by the Guidelines as “situations where a governmental agency can use its judgment in deciding whether and how to carry out or approve a project” (§15002(i)). Discretionary actions are distinguished from “situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations” (§15357).

Under the terms set forth in State law and the CEQA Guidelines, Pleasanton’s approval of a specific plan, development agreement, rezonings/rezonings, and annexations of portions the site are considered “discretionary” actions and, therefore, constitute a CEQA project.

## **b. Program and Project EIR**

This document is a program EIR that addresses a series of zoning actions (prezoning or rezoning, as applicable), pre-annexation agreement(s), and annexation actions pertaining to approximately 600 acres of land, preparatory to adoption of a specific plan.

It is also a project EIR on the specific plan and succeeding actions (tentative map, etc.) needed for the City of Pleasanton to adopt the specific plan and approve detailed planning and implementation of site development.

This EIR addresses these anticipated actions at a level of detail sufficient to identify impacts and propose corresponding mitigation measures. No subsequent EIR and, thus, no new mitigation measures would be imposed for subsequent City approvals. Additional studies may be needed in the future to further refine mitigation measures specified in this EIR that apply to discretionary approvals affecting sites with particular environmental resources (such as wetlands or cultural resources). Measures identified by responsible agencies and requiring implementation by the City must be found to be feasible and capable of avoiding or substantially lessening a significant adverse impact not previously identified in the EIR. No new EIR would be called for to implement the planning and development direction established in the specific plan and its CEQA documents unless required under CEQA Guidelines §15162(a).

### **c. Intended Uses of This EIR**

**(1) City of Pleasanton and the General Public.** The City of Pleasanton is the lead agency for this EIR. The EIR is intended to be reviewed and used by the City of Pleasanton in considering city actions to approve and implement development of the site:

- Approval of a specific plan (SP-95-02) for the SFWD “Bernal Property” and adjoining properties in other ownerships. All the lands in the EIR study area except the land owned by the Pleasanton Unified School District would be included in the specific plan (see Table 1, p. 4).

The specific plan would permit the development of a maximum of 1,900 housing units (exclusive of any ancillary units or “granny flats”); a maximum of 577,000 square feet of commercial space (exclusive of the golf clubhouse and commercial space on the West Parcel); an 18-hole golf course; an elementary school; parks and open space; local circulation improvements; regional circulation improvements within the Alameda County transportation corridor; and other associated uses and improvements.

- Prezoning or rezoning of study area lands, as follows:
  - The 439.7 acres of the SFWD parcel in unincorporated Alameda County currently in the County’s PD District would be prezoned to Pleasanton’s Planned Unit Development (PUD) district (PUD-95-08).
  - The approximately 70.3 acres of the SFWD parcel already within the jurisdiction of the City of Pleasanton would be rezoned to the same Pleasanton zoning district (PUD).
  - The portion of the Alameda County transportation corridor currently proposed for annexation would be prezoned to a transportation zoning classification consistent with the specific plan.
  - The property occupied by the Pleasanton Intermediate School and owned by the Pleasanton Unified School District (PUSD) currently proposed for annexation has already been prezoned as Public and Institutional (P&I).
  - The portion of the I-680 freeway proposed to be annexed would not be prezoned; streets are generally not zoned in Pleasanton.
  - The Union Pacific Railroad, if prezoned, would take the classification of adjoining land (PUD).
- Approval of a development plan, pursuant to the PUD, setting forth the master development plan for the site.
- Approval of a pre-annexation development agreement incorporating the elements of the specific plan and PUD development plan. The development agreement is contemplated to include a guarantee of sewage treatment/disposal capacity for the project. This agreement would require approval by the City of Pleasanton and the City and County of San Francisco.
- Approval of a tax sharing agreement between the City of Pleasanton and Alameda County.
- Annexation to the City of Pleasanton (Annexation No. 141) of the unincorporated portions of the SFWD Bernal property, the Alameda County transportation corridor, the PUSD property, portions of the Union Pacific Railroad right-of-way, and the segment of the I-680 freeway that passes through the property.



- Approval of a master tentative subdivision map to identify the major parcels (“superblocks”) and infrastructure and improvements consistent with the specific plan.
- Approval of site development review for superblocks and subsequent miscellaneous zoning approvals such as conditional use and other design review approvals that the development plan requires.
- Approval of superblock tentative maps and final subdivision maps (if needed).
- Approval of development allocation(s) under the provisions of Pleasanton’s Growth Management Program.
- City grading permits and City building permits, as necessary.

The City of Pleasanton is required to observe an orderly process for preparing, publishing, and formally considering this EIR and subsequent CEQA documents in order to reach decisions on the discretionary actions the documents address. This process provides for review of CEQA documents and the submittal of comments by other interested agencies and the general public, and for the holding of one or more public hearings at which comments may be offered.

**(2) Landowners.** Owners of unincorporated lands in the specific plan study area are the San Francisco Water Department, the Pleasanton Unified School District, the County of Alameda, and the State of California. These agencies may use information in this EIR in reaching decisions about the annexations of their lands to the City of Pleasanton. Owners may accept annexation by not protesting a LAFCo annexation action.

**(3) Other Agencies.** Other public agencies are responsible agencies under CEQA, having review and permitting approval for certain actions required to authorize or implement the project. These agencies are as follows:<sup>8</sup>

- **City and County of San Francisco (CCSF).** San Francisco has authority to approve the development agreement and subsequent development activities on its lands.
- **Alameda County** has authority to approve the pre-annexation tax-sharing agreement and subsequent development activities on its lands.
- **Alameda County LAFCo.** LAFCo has authority to approve Pleasanton’s application for annexation of those portions of the EIR project area currently in unincorporated Alameda County.

The City of Pleasanton expects to file an annexation application with LAFCo consistent with the requirements of the Knox-Cortese Act. That application will supply information about population and development and will detail the City’s plan for providing municipal services to the project site as required by the act. LAFCo may use this EIR as a reference document when considering the future annexation application.

- **Alameda County Flood Control and Water Conservation District, Zone 7 (Zone 7) and the State Water Resources Control Board (SWRCB).** Any development that disturbs more than five acres of land must obtain and comply with the State Water Resources Control Board’s General National Pollutant Discharge Elimination System (NPDES) Permit for storm water discharges

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<sup>8</sup> The list of agencies is adapted from the County EIR, pp. 1-5 through 1-7.



associated with construction activity. Zone 7 has a General NPDES Permit and will require the project to apply for inclusion under this general permit for the construction activity associated with the project. This issue is discussed further in Chapter 5, Part B (Drainage).

In addition, any development that disturbs more than five acres of land must obtain a General Construction Activity Storm Water Permit from the SWRCB.

In the event that recycled water should be made available to the site from the treatment plant operated by the Dublin-San Ramon Services District (discussed further below), Zone 7 would be asked to grant an easement to accommodate the recycled water line.

- **Regional Water Quality Control Board (RWQCB).** The California RWQCB has issued to Zone 7 a permit for water recycling and “blanket” Waste Discharge Requirement permit which will allow a variety of individual recycling projects to be constructed by the Valley agencies. Zone 7 will act as the lead agency for issuing permits for wastewater recycling or reuse of treated wastewater. For any recycling project affecting the project site, the Dublin-San Ramon Services District is likely to be the agency which treats the effluent to the desired level for its reuse; the City of Pleasanton will likely be the agency delivering recycled water to the ultimate user.

Approval of a specific plan does not depend on use of recycled water.

- **Dublin-San Ramon Services District (DSRSD).** While approval of the specific plan does not depend on the use of recycled water (for irrigating golf course, parks, and other public open spaces), DSRSD may contract with Pleasanton to provide recycled water to the specific plan site, and the project may utilize recycled water contingent upon (1) the district’s ability to serve, (2) the cost of providing the water, (3) the implementation of its tertiary treatment program, (4) the ability of the recycled water to meet the criteria of the basin salt management plan, (5) the construction (by the City of Pleasanton) of a recycled water pipeline serving the site from the DSRSD treatment plant, and (6) the ability of the recycled water to meet water quality requirements of the golf course.

This EIR addresses impacts of potential future use of recycled water on the site, and the onsite impacts of construction of a recycled water line.

- **California Department of Toxic Substances Control (DTSC).** Because of the potential for toxic or hazardous substances on the project site, a Preliminary Endangerment Assessment is required. This requirements is discussed further in Chapter 5, Part P (Public Health and Safety).
- **California Department of Transportation (Caltrans).** Any grading or construction activities, the placement of fill materials, and the routing of utilities within a Caltrans right-of-way requires an encroachment permit from Caltrans. The construction of noise berms along the I-680 corridor could potentially encroach into the Caltrans right-of-way; therefore, an encroachment permit may be required. The extension of streets and utilities from the Central Parcel to the West Parcel may also require a Caltrans permit.
- **California Public Utilities Commission (PUC).** The state PUC would have review and permitting approval for any public street crossing of a railroad track.
- **California Department of Fish and Game (CDFG).** A Streambed Alteration Agreement will be required to fill or culvert onsite “B” line channels and possibly (1) the connection of onsite drain-

age improvements to the "B" line channels and (2) the filling of the dry channel of the Arroyo (the finger tributary) in the northwest corner of the West Parcel.

- **U.S. Army Corps of Engineers "404" Permit.** As defined in the Clean Water Act, "waters of the U.S." include coastal waters, rivers, streams, lakes, ponds and wetlands. Any proposal to locate a structure, excavate, or discharge dredged or fill material into waters of the United States is subject to regulation by the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act. Any disturbance to onsite wetlands in excess of one-third acre or 500 linear feet (200 linear feet where a roadway is involved) is subject to Section 404 requirements and will require an individual permit or a nationwide permit. In the event that a Section 404 permit is required, the Corps will also require a certification from the RWQCB under Section 401 of the Clean Water Act (33 USC Section 1341) to ensure that the fill will not cause violations of water quality standards.

The first step in the Federal permitting process will be to conduct a wetlands delineation study consistent with standard Corps methodology and Federal law. A delineation study defines the lands that are within Corps jurisdiction, precisely identifying those lands that meet technical criteria for classification as wetlands. Such lands (1) are saturated or inundated for a significant part of the growing season; (2) support hydrophytic vegetation; and/or (3) contain hydric soils.

A preliminary wetlands delineation study conducted for the County EIR identified 10.69 acres as potential jurisdictional wetlands and other waters.<sup>9</sup> Areas in which the Preferred Plan proposes fill (including drainage channel B-2 and the finger tributary along the Arroyo de la Laguna) would be specifically analyzed to determine whether they fall within the jurisdiction of the Army Corps of Engineers. This issue is discussed further in Chapter 5, Part O (Biology).

Although the U.S. Fish and Wildlife Service (USF&WS) does not have specific jurisdictional or permit authority unless threatened or endangered species are found to be present, it is likely that the Service will also provide comments on the Corps' permit process, as will the U.S. EPA and the California Department of Fish and Game.

- **Other Permits.** Future projects that may be undertaken by other public agencies, as well as City of Pleasanton projects that are not explicitly covered by this EIR, will be required to undergo their own environmental review. Those reviews would be expected to use this EIR as a resource document.

The most significant future project in the vicinity of the specific plan area is expected to be a regional flood control project in the Arroyo de la Laguna. In an effort separate from the present specific plan, a program was adopted in 1966 by the Alameda County Flood Control and Water Conservation District to construct major flood control facilities in Zone 7 along the arroyos and drainage channels for which it is responsible, including the Arroyo de la Laguna.

At such time as Zone 7 completes its flood control planning and prepares a project design for the reach of the Arroyo de la Laguna south of the Bernal Bridge, it will probably be required to obtain the following permits:

- **U.S. Army Corps of Engineers "404" Permit.** The excavation work proposed to implement Zone 7's regional flood control plan within the Arroyo de la Laguna will be subject to the Section 404 requirements and will require a permit.

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<sup>9</sup> Bernal Avenue, Section 404 Jurisdictional Delineation, Zentner and Zentner, prepared for The Planning Collaborative, February 2, 1995.



- *California Department of Fish and Game.* Any project that will change the natural state of any river or stream in California must enter into a Streambed Alteration Agreement with the CDFG. These agreements are referred to as “1603” permits when they are with private parties and “1601” permits when they are with public agencies. The CDFG enters into these agreements to protect the fish and wildlife resources of the state. Any channel modifications that Zone 7 may propose for the Arroyo de la Laguna flood control measures will be subject to the conditions of this agreement.
- *State Water Resources Control Board.* SWRCB, under authority of Section 401 of the Clean Water Act, acts as the agency responsible for state certification of water quality permits related to U.S. Army Corps “404” permit activity. SWRCB delegates this responsibility to the RWQCB, which for this project is the San Francisco RWQCB.
- *United States Fish and Wildlife Service* will be a commenting agency with regard to Arroyo flood control improvements, as is noted above for permits relating to “waters of the U.S.”

As noted, any future regional flood control project on the Arroyo de la Laguna would be subject to CEQA review independent of this EIR.

## **2. Environmental Issues**

The Notice of Preparation (NOP) for this project was published December 27, 1995, identifying a number of issues for consideration in the EIR. The NOP is presented in Appendix A.

In response to the NOP, the City of Pleasanton received letters from the 13 parties listed on the left, below, identifying additional environmental issues:

### **County Agencies**

Flood Control and Water Conservation District, Zone 7	Potential for impacts related to water recycling and wastewater treatment and disposal, flood control, and water supply and groundwater extraction.
Local Agency Formation Commission (LAFCo)	Annexation-related issues as set forth in Section 56841 of the Cortese-Knox Act (letter from Alameda LAFCo). These issues will be addressed in an annexation application separate from this EIR.
Public Works Department	Consideration of a “project contribution toward the restoration of the rails in the County’s Niles Canyon Transportation Corridor and the acquisition of rolling stock for an operator; i.e., WHEELS to operate transit between Pleasanton and Fremont, and improve and use Dublin-Pleasanton corridor as a busway to Dublin/Pleasanton BART to reduce traffic congestion.”

### **State Agencies**

Department of Fish and Game	Possible disturbance of sensitive species; potential for disturbance of jurisdictional wetlands, and possible effects on surface water quality.
Regional Water Quality Control Board, S.F. Bay Region	Potential for disturbance of jurisdictional wetlands and adverse effects on storm water quality.

### **Federal Agencies**

Department of the Interior	Possible disturbance of sensitive species.
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### Special Purpose Agencies

Congestion Management Agency (CMA)	Potential impacts on the metropolitan transportation system, Congestion Management Program (CMP) transit levels of service, feasibility of funding roadway and transit improvements, and potential for trip reduction measures. This letter also states that the DEIR should “indicate that the Regional Transportation Plan, a financially constrained list of transportation expenditures for the next 20 years, does not include improvements to I-680 in the vicinity of the project nor does it include interchange improvements at Sunol Boulevard or Bernal Avenue, that is, state or federal funding is not currently allocated to these projects.”
Livermore Amador Valley Transit Authority	Provision of public transit and “associated amenities like bus service, location of bus pullouts, shelters, etc.”
Livermore Area Recreation and Park District	Provisions incorporated in the project for links to existing and proposed parks, recreational programs for office/commercial workers, and open space mitigation contributions.

### Private Parties

Alameda County Fair	Potential for complaints from new residents of the project area related to operations of the fairgrounds (noise, traffic, lights); flood control issues related to increase in impervious surface on the SFWD property, issues related to potential future development of the fairgrounds; impacts on fairgrounds water supply (from wells).
Castlewood Property Owners Assoc.	Potential impacts on the water supply and transport system for the Castlewood area.
McCutcheon, Doyle <i>et al.</i> , Attorneys	Potential impacts related to project proximity to the existing Hüls America, Inc. operation southeast of the site.
William H. Plageman, Jr. & Associates, Attorneys	Potential impacts related to project proximity to the existing Kaiser Aluminum & Chemical Corp. operation southeast of the site.

Subsequent to the NOP, operators of the Castlewood Country Club communicated to the City of Pleasanton their interest in having the EIR evaluate the possibility of their acquiring some Bernal property lands adjacent to the Castlewood Lower Golf Course, to allow a relocation of up to four golf holes. Such a transfer is not given CEQA coverage in this EIR, because (1) it is inconsistent with the objectives of the project sponsor and (2) is incompatible with the Cooperative Plan and the Preferred Plan. It is possible that such a transfer would be compatible with Alternative 2 (while still inconsistent with the project sponsor’s objectives), but neither the adjustments to the SFWD land use plan that would be required to make it possible nor the environmental impacts of such an adjusted plan have been analyzed.

## E. ORGANIZATION OF THIS EIR

**Chapter 1, Summary** (Guidelines §15122) provides a summary of the environmental review. It begins with a brief description of the project, and then highlights the potential significant adverse environmental effects and mitigation measures recommended to reduce those effects to a less-than-significant impact.

**Chapter 2, Project Description** (this chapter) presents a description of the project and the EIR.

**Chapter 3, Alternatives to the Project** describes the evolution of the project alternatives. This EIR evaluates four specific plan concepts: the Cooperative Plan (the “project” under CEQA), the Preferred Plan (Alternative 1), one alternate plan that was considered by the Pleasanton City Council (Alternative 2), and the County’s adopted specific plan (Alternative 3). It also considers minor variants of the Cooperative and Preferred Plans.

**Chapter 4, Project Options.** In addition to the project alternatives presented in Chapter 3, this EIR reviews nine site design variations generally consistent with the overall development plan alternatives. These potential variations include, for example, different alignments for Valley Avenue through the site, different sites for the elementary school, different treatments of the knoll on the East Parcel, and a series of other site treatments. These options are generally compatible with more than one alternative. They are presented as a group in a separate chapter (Chapter 4) so that information that would apply to all future conditions except the “no project” can be found in one place.

**Chapter 5, Environmental Setting, Impacts, and Mitigation Measures** examines the likely environmental impacts of the four specific plans. Although the EIR project is the Cooperative Plan, the project that is currently expected to be presented for approval is based on the Preferred Plan (Alternative 1). For this reason, the CEQA analysis of the Preferred Plan is presented at the same level of detail as the Cooperative Plan.

The two other alternatives are evaluated at a lesser degree of detail, with a focus on the differences in impact between each respective alternative and the Cooperative Plan and Preferred Plan. Alternative 3, the adopted County specific plan, was analyzed in detail in an Alameda County (DEIR, March 1995; Recirculated DEIR, October 1995; FEIR (dated June 1996) certified August 1, 1996).

**Chapter 6, Consistency with Local Planning** contains two sections. The first describes applicable City of Pleasanton goals, policies and programs and identifies inconsistencies between the proposed specific plan and the City’s established framework for planning in the area. The second reviews planning considerations that relate to local activities and responsibilities of non-City agencies.

**Chapter 7, Cumulative and Growth-inducing Impacts, and Chapter 8, Other Environmental Considerations,** address CEQA-mandated topics. **Chapter 9, Sources,** presents a list of documents, individuals, and organizations contributing information used in the preparation of this EIR.



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## **CHAPTER 3**

### **ALTERNATIVES TO THE PROJECT**

#### **A. INTRODUCTION**

##### **1. CEQA Requirements**

CEQA requires that EIRs evaluate a range of reasonable alternatives to the project. The range of alternatives considered is to “include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one or more of the significant effects.” (Guidelines, 15126(d)(2)) “The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.” (Guidelines, 15126(d)(5))

This chapter describes how alternatives addressed by this EIR were selected and provides a detailed description of those alternatives. The impacts of alternatives are evaluated in tandem with those of the project in Chapter 5.

##### **2. Rationale for EIR Alternative Selection**

###### **a. Alternatives Addressed in this EIR**

The stage was set for the preparation of a specific plan for the San Francisco Water Department (SFWD) Pleasanton lands when the 1986 Pleasanton General Plan changed the land use designation of the site from industrial to “Specific Plan,” allowing the uses for the site to be determined through a specific plan process. As noted above (Chapter 2, Part C (Evolution of the Project)), the Cooperative Plan that is the CEQA project was defined jointly by the City of Pleasanton and SFWD on December 12, 1996 and affirmed in concept by both parties and Alameda County in January 1996.

Alternatives to the Cooperative Plan were formulated, evaluated, and further explored from January 1996 on as the Pleasanton City Council and staff along with representatives of SFWD have considered how best to accomplish the development objectives of each party while respecting the site’s unique characteristics: location, visibility, physical features, and environmental considerations.

This EIR considers three alternatives to the Cooperative Plan. Two of these alternatives were formulated in the months after SFWD and Pleasanton agreed to the Cooperative Plan concept, and all three alternatives reflect the mixed-use concept that underlay both the 1986 Pleasanton General Plan’s designation of the site and the retention of that designation in Pleasanton’s 1996 General Plan update.

Within a mixed-use framework, however, considerable range is possible in terms of types and locations of land uses. The selection of alternatives for the EIR reflects that range: the three mixed-use plans chosen as alternatives encompass variations in the acreage of certain land uses provided, the siting of those uses, and the intensity of permitted development. These differences are described in Part B. Narrative Description.



## **b. “Categorical” CEQA Alternatives**

Alternatives analysis under CEQA often includes certain categorical alternatives: a “maximum” development concept, a “minimum” development concept, an offsite alternative, and a “no project” or “no action” alternative (sometimes both). In this EIR, these categorical concepts are treated as follows:

- **Maximum development concept.** A maximum development alternative for the project is represented by the Draft Bernal Property Specific Plan (Alameda County, March 1995), which represented a more intensive development program for the site: 3,380 housing units and up to 750,000 square feet of commercial space (200,000 retail and 550,000 office). This development plan was addressed in the County’s DEIR. As a result, in part, of the CEQA review and the Cooperative Planning Process, the development program for the site was reduced to a maximum of 2,500 residential units and 577,000 square feet of commercial and office space development as approved by Alameda County. The prior consideration of a maximum development concept in the County DEIR makes consideration of that alternative unnecessary in this EIR.
- **Minimum development concept.** No alternative representing a development program substantially reduced from those of the City and County has been evaluated. The SFWD property is an infill site almost completely surrounded by urbanized Pleasanton and well-served by transportation routes. The site enjoys minimum trip distances to residential areas, jobs, shopping, and public/civic uses and ready access to Pleasanton’s already-developed public facilities and services. Under these circumstances, it would not be environmentally beneficial to minimize development on this site. Moreover, because a more intensive level of development could proceed under the county jurisdiction, an alternative of substantially less intensity than those analyzed would not be feasible.
- **Offsite alternative.** This EIR does not consider an offsite alternative because no equivalent site exists. SFWD has no other site at its disposal of a scale and location so suitable for major project development within an existing urban context. The City of Pleasanton has no other vacant site so advantageously located with respect to access to downtown Pleasanton, to local and regional transportation facilities, and to both housing and employment opportunities. The Tri-Valley area offers no site of a comparable size and equivalent accessibility to transportation and urban facilities at which development might be expected to have a lower level of environmental effects. For these reasons, analysis of an alternative site would not be useful.
- **The County EIR, referring to CEQA Guidelines §15126(d)(5)(B), considered whether any of the significant effects of the project addressed by the County DEIR could be avoided or substantially lessened by placing the project in another location.<sup>10</sup>** The discussion of alternative sites from the County EIR is hereby incorporated by reference. The sites investigated were found either infeasible, or incapable of reducing environmental impacts, or both.
- **No project and/or no action alternative.** The County specific plan functions as the “no project” alternative because, if no specific plan is approved under Pleasanton’s jurisdiction, SFWD would be able to proceed with development under County jurisdiction. The existing condition, which is the standard of comparison for environmental impacts, represents the “no action” alternative.

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<sup>10</sup> Draft Environmental Impact Report on *San Francisco Lands: Specific Plan for the Bernal Property*, March 1995, pp. 5.0-51 through 54. This DEIR is part of the FEIR subsequently certified by Alameda County (see citation at footnote 1).

### **c. Alternatives Rejected During the Scoping Process**

This EIR has had the advantage of a prolonged consideration of various approaches to the development of the project site. As noted in the Cooperative Plan recommendations document, the cooperative planning process “benefited from the preparation of two published draft environmental impacts reports examining various development alternatives following years of planning review of various development concepts.”<sup>11</sup>

These alternatives were defined and reviewed in County and City CEQA documents:

- **Draft EIR on Draft Bernal Property Specific Plan, County of Alameda.** The County’s DEIR on its 1995 draft plan includes an inventory of the development concepts and scenarios given earlier consideration, and explains why these approaches were rejected during the scoping process for that document. Appendix C to this EIR is an excerpt from the County’s DEIR describing three classes of alternatives considered and rejected in that document: single-use alternatives, lower-density residential alternatives, and alternative design schemes. The rejection of these schemes by the County was soundly based and applies to this CEQA document as well.
- **Prezoning RZ-94-07 and Annexation, City of Pleasanton.** The City of Pleasanton prepared a DEIR, published March 1995, addressing a prezoning and annexation for the SFWD Bernal Property and adjacent parcels.<sup>12</sup> That document considered, at an equivalent level of detail, a series of development scenarios ranging from a low of 800 housing units and 250,000 square feet of commercial space up to the 3,380 housing units and 750,000 square feet of commercial space proposed in the County’s draft specific plan.

These earlier CEQA inquiries resulted in the selection of a range of development intensity for the site that has already been demonstrated to be capable of meeting most applicable environmental criteria. The reasons for eliminating alternatives of greater or less scale have already been set forth and documented.

In addition, the offsite alternative has been rejected for the reasons indicated in Subsection b, above.

## **B. NARRATIVE DESCRIPTION OF PROJECT ALTERNATIVES**

### **1. Alternative 1: The Preferred Plan**

The Pleasanton City Council considered a sequence of site plan alternatives during the months after conceptual approval of the Cooperative Plan. Some of these interim concepts included site plan options different from those reflected in the plan alternatives presented here; those options are addressed in Chapter 4.

As review of the plan continued, Council members expressed an interest in an alternative that would reflect the site planning concepts of what has come to be known as the “New Urbanism” or “neo-traditionalist” planning movement. The Council’s discussions resulted in the decision to engage a site planning firm to prepare a plan that would incorporate neo-traditionalist planning strategies in the specific plan. Calthorpe

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<sup>11</sup> Cooperative Plan Recommendations, December 12, 1995 (presented as Appendix B), p. 2.

<sup>12</sup> Draft Environmental Impact Report, Prezoning RZ-94-07 and Annexation, City of Pleasanton, March 1995, and Final Environmental Impact Report, same project, May 1996 [not certified]. The underlying project was withdrawn in favor of pursuing the cooperative planning process.



Associates of Berkeley, a site planning and urban design firm specializing in neo-traditional planning, began work early in 1996 in response to the City Council's charge.

The site planning work undertaken by the Calthorpe office began with the Cooperative Plan as its starting point and has generated a series of plans. By May of 1996, staff of the City and SFWD and their consultants had a plan that, at least conceptually, approached the requirements of participants closely enough to take on the label "Preferred Plan." This plan incorporates some "neo-traditional" site planning elements that the Cooperative Plan had not: the clustered Village Center; the entry to the Village Green, an aggregation of higher densities near the Village Center; smaller, accessible neighborhood parks; elimination of thoroughfare-level streets; and greater emphasis on straight streets with neighborhood focal points (as compared with the curvilinear streets in the Cooperative Plan).

At the same time, the Preferred Plan retains a number of characteristics of the Cooperative Plan that are also considered "neo-traditional": emphasis on pedestrian and other non-vehicular circulation, mixed use in the Village Center, overall mixed use community, transit-friendly street and land use design, denser residential neighborhoods, and a full complement of neighborhood-serving land uses.

#### **What is Neo-traditional Planning?**

"Neo-traditional" is a term that describes a planning approach that recalls urban development patterns and building forms of the 19th Century. Plans reflecting the neo-traditional philosophy employ a variety of siting and design strategies that de-emphasize the automobile and emphasize human scale and activities.

In neo-traditional plans, development is at somewhat higher densities than typically prevail in suburban communities and both residential and non-residential development are included, sometimes within the same building and often in close proximity; the circulation plan provides for pedestrian movement, public transit, and other non-automobile circulation as well as for passenger cars; streets are typically narrower than in standard subdivisions and the street network forms a more inter-connected pattern; and residences are sited and designed to be "friendly" to the street (de-emphasizing garages). The basic theme is a higher degree of integration of the activities of potential residents: work places, retail and service businesses, and recreational resources should, ideally, all be sited within walking distance, and the pedestrian circulation system should make both transit and trails available by foot from residences and work places.

Refinement of this "Preferred Plan" has continued up to the time of this EIR, each succeeding version adjusting the prior versions to meet the specifications established in the Cooperative Plan Agreement and to respond to other planning goals and objectives of the City and the San Francisco Water Department. The Preferred Plan as revised effective February 1997 is potentially acceptable to the City and the applicant provided that, at the time of adoption, it fully meets the goals and objectives outlined in the Cooperative Plan process, including a commitment of 250 developable acres.

## **2. Alternative 2: No Golf Course Plan**

One of the intermediate concept plans eliminated the golf course in order to explore what other possibilities might be available if 150+ acres of the site were not committed to golf use. The result was Alternative 2.

The provision of a golf course in the specific plan affects the circulation plan, site planning for other uses, potential residential densities, and the options available for mitigation of certain impacts including, importantly, impacts on flood control, noise, and visual resources. Visual considerations represent one of Pleasanton's reasons for wanting a golf course. Golf courses are landscaped and largely irrigated, meaning that

they provide “green” views from both the inside and the outside. Circulation routes adjacent to golf courses have the benefit of attractive views and residential properties adjacent to golf courses typically command higher prices.

Golf courses require substantial acreage (150 to 180 acres minimum) as well as consideration of layout, design, and safety issues. Courses are always “played” in the same sequence (Hole 1, then Hole 2, and so on), requiring sequential holes to be adjacent in a linear or zigzag arrangement. Siting of holes relates to the location of the clubhouse: for many reasons, a “returning nines” layout, in which both the first nine holes and the second nine holes originate from the clubhouse, is preferred by golfers, course managers, and course owners. Because the SFWD site consists of parcels separated by major transportation facilities, a returning nines layout of a golf course on this site means a commitment of sufficient lands on the West and Central Parcels to accommodate nine holes each.

Eliminating the golf course allows more site planning flexibility and frees up substantial acreage for alternative open space uses. In lieu of a golf course, Alternative 2 gives emphasis to water features (referred to in the land use table [Table 4, pp. 28-29] as “lake”). These features serve several purposes parallel to the benefits offered by the golf course: a substantial area of open land remains, potential for “green” views is retained, property value benefits associated with proximity to landscaped open space would still be present, and mitigation potential for flood control and noise attenuation could still be integrated into the plan.

### **3. Alternative 3: Bernal Property Specific Plan, County of Alameda**

The County’s specific plan had already been published in draft at the time the Cooperative Plan process began. Under the terms of the Cooperative Agreement, Alameda County continued its public review of its draft plan. Even before agreement on the Cooperative Plan had been reached, the County had revised its Draft EIR (which had been published in March 1995) to re-analyze key issues of traffic and circulation, water and wastewater, and noise, and to present two reduced-development alternatives. By addressing these additional alternatives in a Recirculated Draft EIR (issued in October 1995), the County made possible the eventual adoption of a specific plan in which the magnitude of development proposed was considerably reduced from that set forth in the original specific plan.

The County’s specific plan was adopted by the Alameda County Board of Supervisors in August 1996, based on the revised project addressed in its Final FEIR. The revised project includes a range of 1,600 to 2,500 housing units and a commercial capacity of 577,000 square feet (170,000 square feet of retail and 30,000 square feet of office in the Village Center, approximately 301,000 square feet of office development, and approximately 75,400 square feet of general commercial space).<sup>13</sup>

In addition to changes in the magnitude of development, the County’s specific plan as adopted incorporates “significant refinements to the Project’s specific design and description” that have resulted from response to comments from agencies and the public, mitigation measures recommended through the environmental review process, and the cooperative planning efforts of the City of Pleasanton, the County of Alameda, and the San Francisco Water Department. The county’s adopted specific plan conforms to the Cooperative Plan Agreement. It is that specific plan, rather than the County’s draft specific plan, that constitutes Alternative 3.

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<sup>13</sup> County EIR, Chapter 2. Cooperative Planning Process, Part C. Cooperative Plan Project Description (pp. 2-5 and 2-6).



## **C. SUMMARY DESCRIPTION OF THE PROJECT AND ALTERNATIVES**

### **1. Specific Plan Area**

In formulating alternatives for the specific plan study area, the focus has been on those lands within Pleasanton's "Specific Plan" designation that are owned by SFWD, which amount to approximately 510 acres.

The specific plan designation also includes other lands, as identified in Chapter 2 (see Table 1, p. 4). These additional lands are either developed (e.g., I-680) or committed to a specific use (the Alameda County transportation corridor). Collectively, these lands together with the SFWD lands amount to a total of more than 596 acres. The project and the alternatives would not alter the land use on the non-SFWD portion of the site.

### **2. Development Programs**

Table 4 (pp. 28-29) shows the land use allocation of the project and alternatives. Residential units would be developed on acreages ranging from a low of roughly 195 acres to a high of about 221. Village Commercial space would occupy between 17.5 and 21 acres and commercial/office space would occupy between 13 and 31 acres. More substantial differences among the alternatives arise in the various categories of public use: civic, school, parks, roads, and other types of open space.

Table 5 (p. 27) shows the residential unit count and commercial square footage of various land uses. Residential use would have the same unit count under the project and Alternatives 1 and 2; under Alternative 3, the unit count is given as a range. Village Commercial use would be 200,000 square feet (of primarily local-serving retail) under the project and all alternatives. Commercial/office space would be 377,000 square feet under the project and all alternatives.

### **3. Project Options**

During the evolution of the project alternatives, decisions were made for each alternative regarding a number of site planning choices that relate to the siting of facilities, the strategy for providing infrastructure, or the approach to environmental mitigation.

The options, discussed in detail in Chapter 4, relate to:

- (1) Potential purchase by the City of a portion of the site for civic use;
- (2) Choice of a site for a fire station;
- (3) Choice of a site for an elementary school;
- (4) Project storm drainage strategies;
- (5) Regional flood control strategies for the Arroyo de la Laguna;
- (6) Valley Avenue alignment on the Central Parcel, extension to the East Parcel, and crossing of Union Pacific railroad tracks;
- (7) Bernal Avenue intersections;

- (8) View potential from I-680 and Bernal Avenue; and
- (9) Retention of natural features.

The site plans for the project and each alternative reflect specific choices on these options but in many cases can accommodate one or more other choices. As the planning process moves forward, decision-makers will consider not only the project alternatives addressed in this EIR but also various ways those alternatives might be adapted to reflect different decisions about the project options. The discussion of the options in Chapter 4 indicates the alternatives with which each site plan option is compatible, and the impact analysis in Chapter 5 addresses the ability of some of the options to mitigate impacts of site development while it also identifies the environmental impacts of particular options.

**Table 5**  
**Building Space Characteristics of the Cooperative Plan and Alternatives**

	Project (Cooperative Plan)		Alternative 1 (Preferred Plan)		Alternative 2 (No Golf Course)		Alternative 3 (County Spec. Plan)	
	Acres	Units/Sq. Ft.	Acres	Units/Sq. Ft.	Acres	Units/Sq. Ft.	Acres	Units/Sq. Ft.
Residential		1,900		1,900		1,900		2,500 <sup>a</sup>
Comm'l/Office								
Retail	20	200,000	21	200,000	21	200,000	20	200,000
Office	31	377,000	13.4	377,000	13.4	377,000	31	377,000
Add'l Comm'l				5,000 <sup>b</sup>				
Total		577,000 <sup>c</sup>		582,000 <sup>c</sup>		577,000		577,000 <sup>d</sup>

<sup>a</sup> Residential units are given as a range of 1,600 to 2,500; local transportation impacts would be mitigated up to 2,500 units.

<sup>b</sup> The Preferred Plan allows for additional commercial development on the West Parcel in the amount of 5,000 square feet (February 1997 Preferred Plan Design Guidelines) as well as a larger golf clubhouse (40,000 square feet) than under the Cooperative Plan (20,000 square feet). These two provisions are in addition to the total of 577,000 square feet in the commercial use category under the Cooperative Plan.

<sup>c</sup> The commercial/office breakdown is an estimate; the Cooperative and Preferred Plans allow for a mix of retail and commercial without mandating a specific amount for each category, not to exceed 577,000 square feet on the Village Commercial parcels.

<sup>d</sup> The County specific plan apportions Commercial/Office space between "Village Center" commercial consisting of 170,000 square feet of retail and 30,000 square feet of office, and other commercial consisting of up to 75,400 square feet of retail (20%) and 301,600 square feet of office (80%).

Source: Project and Alternatives 1 and 2, City of Pleasanton;  
Alternative 3, County EIR, Chapter 2



Table  
Land Use Characteristics of

Use ↓	Parcel ↓	Proposed Project <sup>a</sup> "Cooperative Plan"		Alternative 1 <sup>b</sup> "Preferred Plan" (May 1996)	
SFWD Bernal Property, Total		508±		508±	
Residential Total		200 (193)		195.4	
	Central	65 (58.0)		75.2	
	West	91 (91.0)		89.0	
	East	44 (44.0)		31.2	
Village Commercial	Total	20		21	
	Central	20		20	
	Other	0		1	
Commercial Office	Total	30 (20)		13.4	
	Central	30 (20)		13.4	
Civic Total		0 (17)		14.3	
	Central	0 (17)		13.3	
	West	0		1.0	
	East	0		0	
Other Public Uses	Total	6		11	
	School (Varies)	5 East		10 East	
	Fire Station East	1		1	
Parks, Total		30		32.6	
	Village Green Central	0		1.6	
	Neighborhood Park	10		16	
	Central	0		0	
	West	5		6	
	East	5		10	
	Community Park	20		20	
Other Open Space		40		44.1	
	Central	8 [buffers]		2.6	
	West	27 [Arroyo]		27.0	
	East	5 [buffers]		9.5	
Roads	Total	25		8	
	Central	22		6.7	
	West	0		0	
	East	3		1.3	
Lake		None		None	
	Central	0		0	
	West	0		0	
Golf Total		157		168.2	
	Central	80		91.2	
	West	77		77.0	
Other Owners, Total		88±		88±	

<sup>a</sup> Cooperative Plan acreage as shown in County Specific Plan, Table 3-2. Italicized figures represent a variant of the Cooperative Plan in which the City of Pleasanton would purchase up to 17 acres of the SFWD property along Bernal Avenue. The purchased land would be developed for civic use(s). The acreages devoted to residential and commercial office uses would be reduced to compensate for the increase in land area devoted to civic uses. Under Alternative 1, the same provision for acquisition is included, but the amount would be up to 13 acres.

4  
the Project and Alternatives

Alternative 2 <sup>b</sup> "No Golf Course"	Alternative 3 County Adopted Specific Plan	Parcel ↓	Use ↓
508±	508±	SFWD Bernal Property, Total	
221.3	200 (193)	Total	Residential
86.5	65 (58.0)	Central	
94.8	91 (91.0)	West	
40.0	44 (44.0)	East	
17.5	20	Total	Village Commercial
14.5	20	Central	
3.0	0	Other	
23.6	30 (20)	Total	Commercial/Office
23.6	30 (20)	Central	
3	0 (13)	Total	Civic
0	0 (13)	Central	
3	0	West	
0	0	East	
11	6	Total	Other Public Uses
10 Central	5 East	(Varies)	School
1	1	Central	Fire Station
46.5	30	Total	Parks
0	0	Central	Village Green
24.6	10	Total	Neighborhood Park
8.6	0	Central	
14	5	West	
2	5	East	
21.9	20	Central	Comm'ty Park
74.2	50	Total	Other Open Space
10.6	8 [buffers]	Central	
46.0	37 [Arroyo]	West	
17.6	5	East	
22.4	25	Total	Roads
19.0	22	Central	
0	0	West	
3.4	3	East	
88.5	None	Total	Lake
48.3	0	Central	
40.2	0	West	
0	149	Total	Golf
0	80.7	Central	
0	68.3	West	
88±	88±	Other Owners	

<sup>b</sup> Preferred Plan acreage from the Calthorpe Associates plan of May 1996 identified as "Alternative 5." The Preferred Plan is conceptual and is expected to be revised, as described in the text, p. 7. In view of the conceptual nature of the Preferred Plan, acreage comparisons with the Cooperative Plan should be order-of-magnitude only. The land purchase variants described for the Cooperative Plan also apply to the Preferred Plan. – See also footnote c to Table 5, p. 27, regarding provision for additional 5,000 square feet of commercial space on the West Parcel.



#### **4. Site Plans**

Figures 4, 5, 6, and 7 (pp. 31, 32, 33, and 34) present the site plans for the project and alternatives. The following brief narratives are intended to highlight differences among the plans rather than to catalogue features of each.

##### **a. Cooperative Plan (January 1996)**

The Cooperative Plan envisions a mixed use project with Village commercial (primarily retail) and commercial office (primarily workplace uses) aligned along the south side of Bernal Avenue, and residential uses dispersed along curvilinear streets in a golf course setting on West and Central Parcels and in a more traditional street grid arrangement on the East Parcel. The golf course would include nine holes each on the Central and West Parcels. Public and community uses would include a community park on the Central Parcel (in the vicinity of the Pleasanton Civic Center), a fire station and school on the East Parcel, and community open space along the Arroyo de la Laguna at the western edge of the project site.

##### **b. Preferred Plan (May 1996) – *Alternative 1***

The Preferred Plan focuses Village commercial and commercial office on a village green that marks the Valley Avenue entrance into the site. As compared with the Cooperative Plan site plan, commercial development shifts from along Bernal to the northwestern corner of the Central Parcel, where its placement will give it a stronger “centralizing” effect for the project. The largest residential development on the Central Parcel would be wholly surrounded by golf; a second large residential area has the potential to be closely tied into the urban design for the village center, which it adjoins.

##### **c. No-Golf-Course Plan – *Alternative 2***

This plan has a more formal quality, with Village commercial and village residential symmetrically disposed on a grid pattern accessed from Bernal Avenue about midway along the project’s northern frontage. Lake features are used on both Central and West Parcel to break up and give shape to residential areas.

##### **d. County Specific Plan – *Alternative 3***

The site plan and general arrangement of land uses is virtually identical to that of the Cooperative Plan.

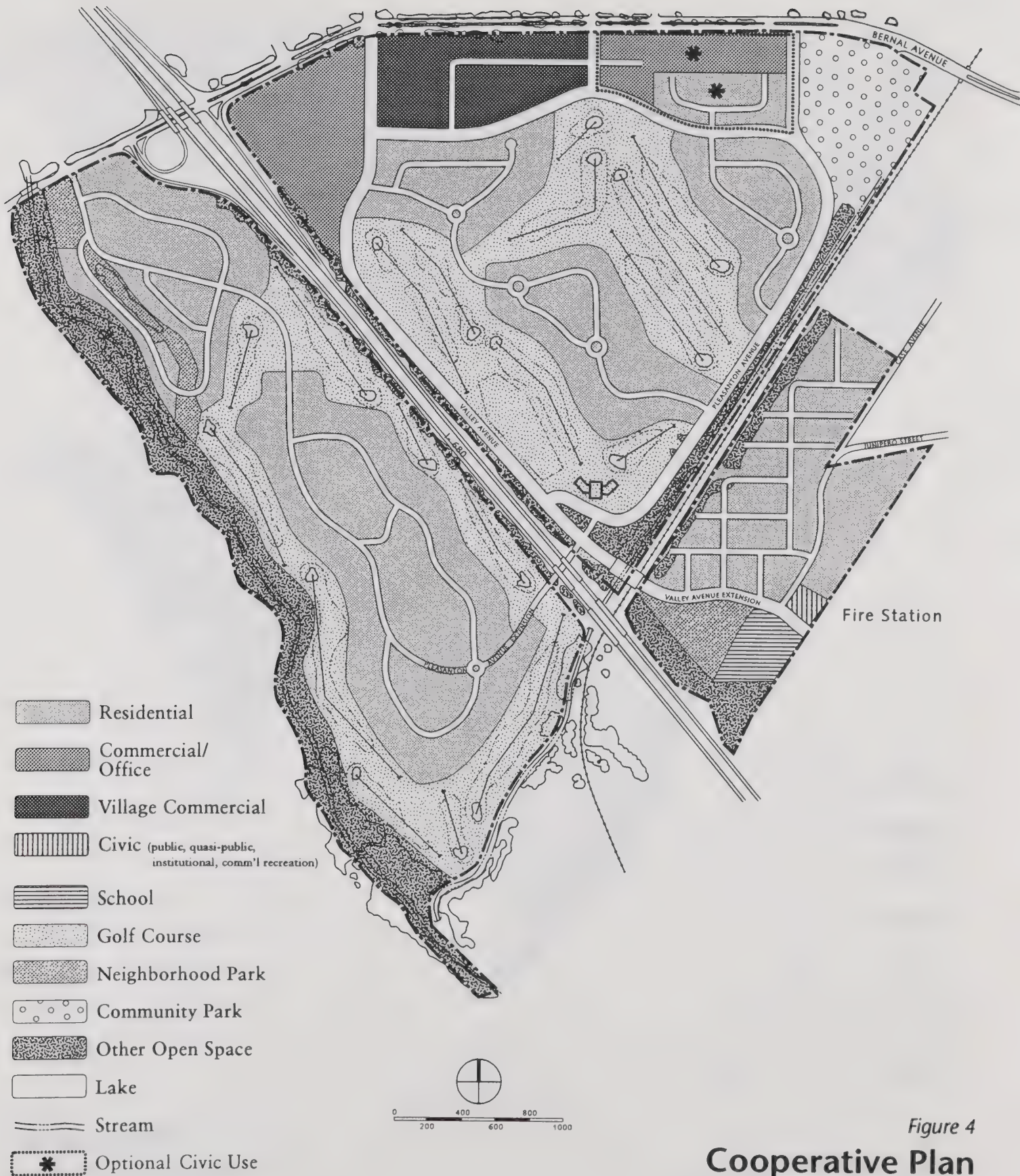


Figure 4  
**Cooperative Plan  
"The Project"**



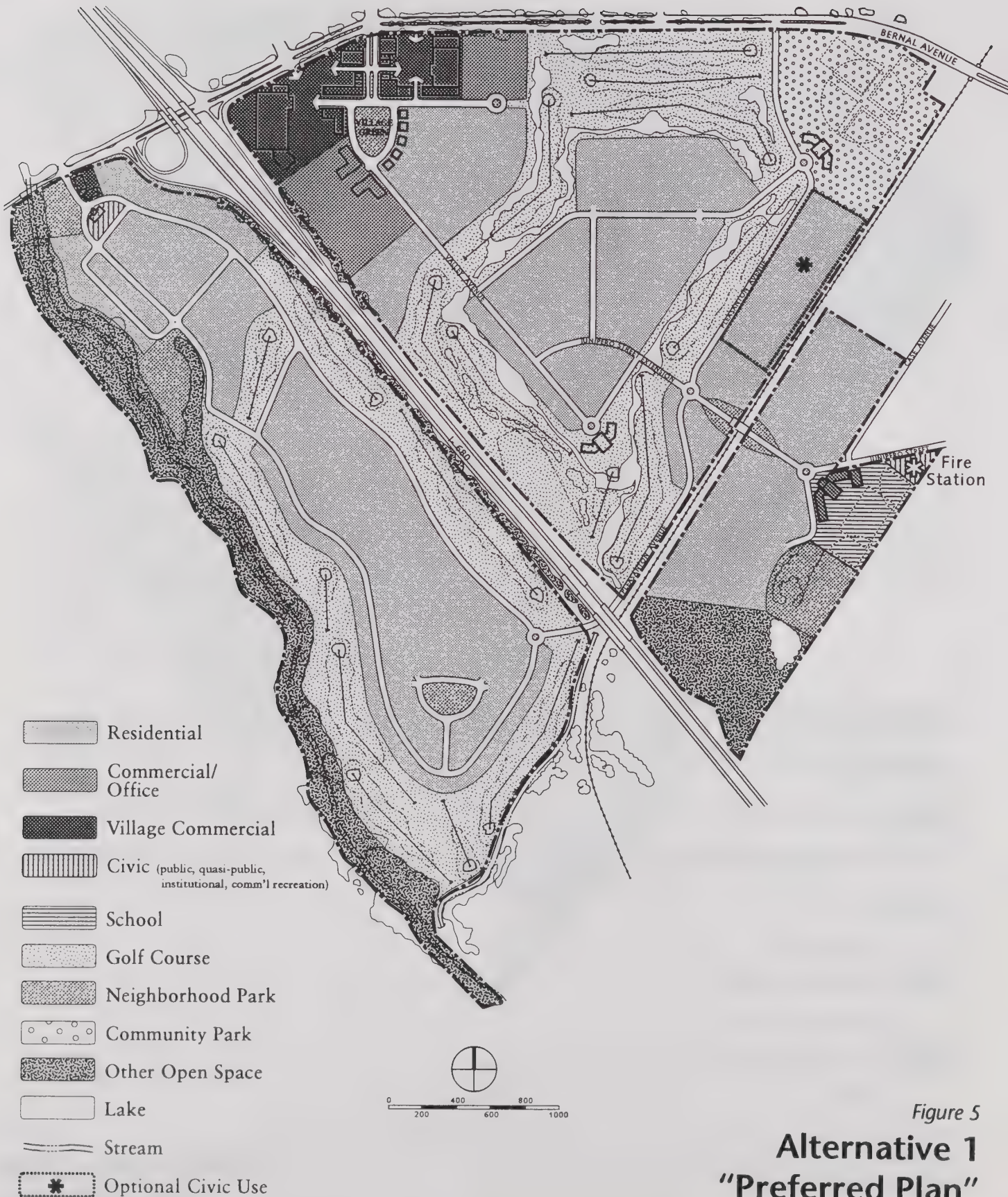


Figure 5  
**Alternative 1**  
**"Preferred Plan"**  
(May 1996)



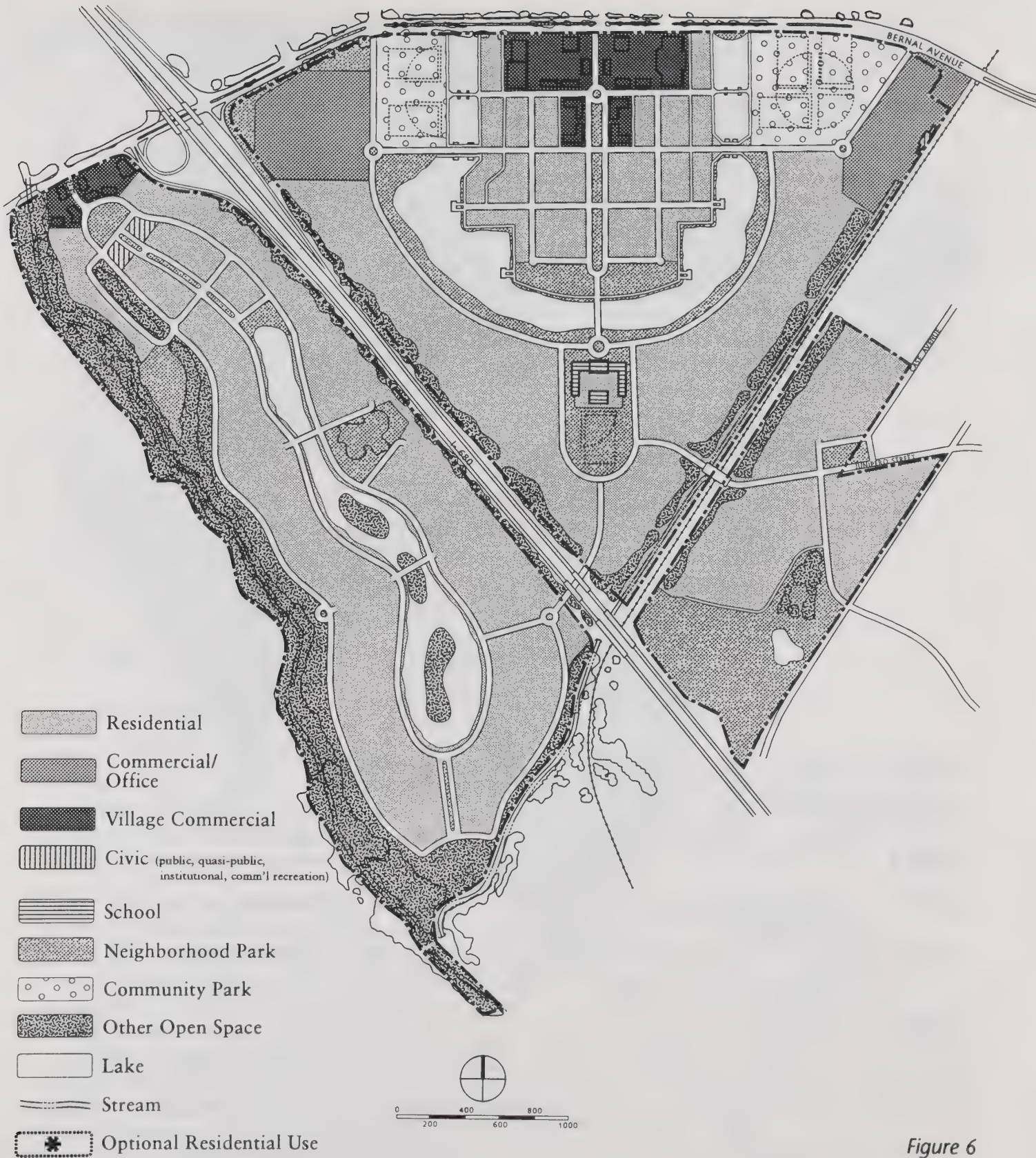


Figure 6  
**Alternative 2**  
**"No Golf Course Plan"**



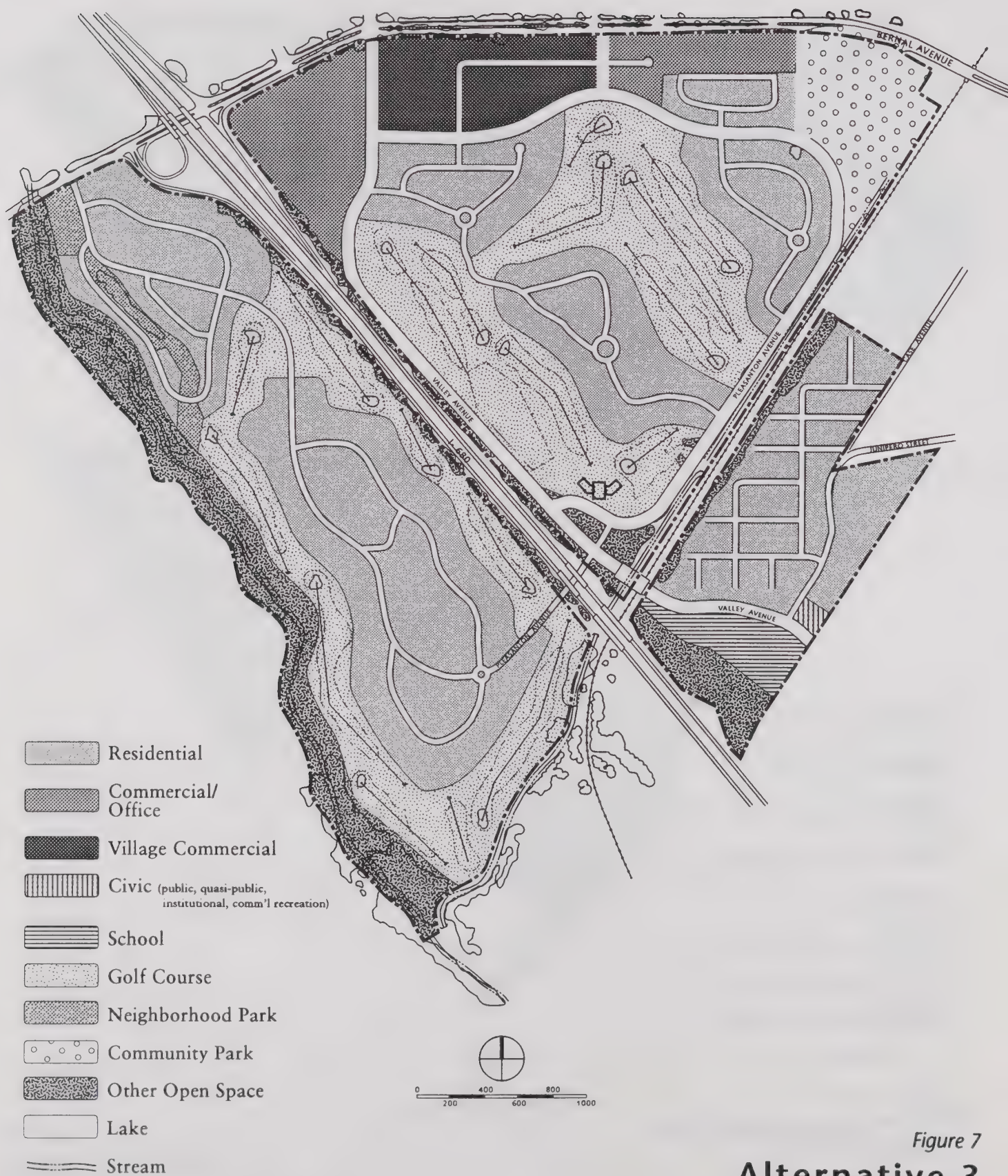


Figure 7  
**Alternative 3  
County Specific Plan**



## CHAPTER 4

### PROJECT OPTIONS

#### A. INTRODUCTION

During the evolution of the project alternatives, decisions were made for each alternative regarding a number of site planning choices. Some of these decisions relate to facilities siting, some to infrastructure strategy, and some to opportunities for environmental mitigation. The following site plan elements involve two or more potential options:

1. City land purchase
2. Fire station site
3. School site
4. Project storm drainage strategies
5. Arroyo de la Laguna regional flood control strategies
6. Valley Avenue alignment: extension and grade separation with Union Pacific tracks
7. Bernal Avenue intersections
8. View potential from I-680 and Bernal Avenue
9. Retention of natural features on site

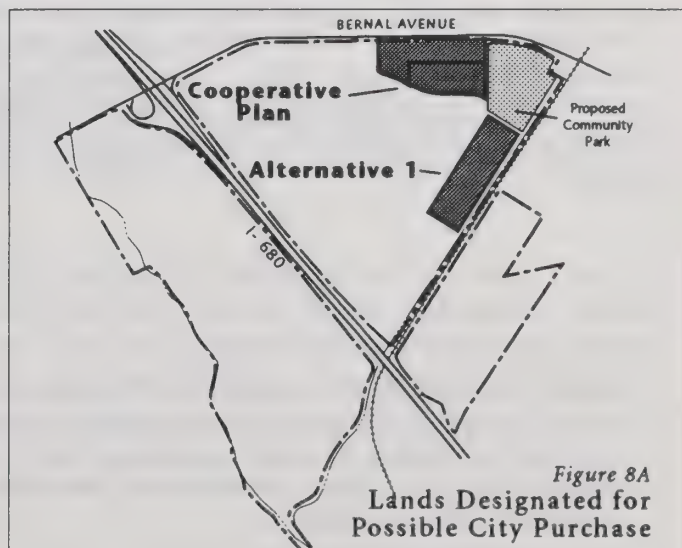
This chapter describes the options; the impacts of the options are analyzed in Chapter 5 under the alternative(s) to which the options apply. In the case of regional flood control strategies for the Arroyo de la Laguna, each option would be a project in its own right for which separate CEQA review would be required. Possible improvements in the Arroyo are not part of the specific plan.

#### B. DESCRIPTION OF OPTIONS

##### 1. City Land Purchase

The City of Pleasanton has expressed interest in purchasing some land from the SFWD for community and cultural arts uses. Under the Cooperative Plan, the desired acreage is along Bernal Avenue toward the northeastern corner of the site, in the vicinity of the Pleasanton Civic Center. Under the Preferred Plan, the acreage desired would be along the UPRR tracks. In both cases, the site proposed for purchase is adjacent to the area designated for a community park.

The purchase of the additional land (from zero to 17 acres under the Cooperative Plan and zero to 13 acres under the Preferred Plan) would expand the area of the project site devoted to public uses, such as civic and park, while the project sponsor would be compensated for the reduction in acreage available for private development. The Cooperative and Preferred Plans could be implemented under either of two conditions: without and with sale. Acquisition of the land would not affect development intensity on the balance of the site (1,900 dwelling units and 577,000 square feet of commercial development, plus the other uses described in Chapter 2).





Purchase of the land would give Pleasanton greater flexibility in the siting of civic and public land uses, particularly along Bernal Avenue. If the land is held by the City as passive open space, the purchase would not pose any environmental impacts beyond those addressed in Chapter 5, Part A (Land Use).

However, use of the land for any civic use other than passive open space would result in additional impacts (added traffic, potential visual impacts along the Bernal corridor, etc.). These additional impacts would have to be addressed at the time the City of Pleasanton proposes any such uses.

## **2. Fire Station**

The project and Alternatives 1 and 3 propose a site for a fire station within the specific plan area. The box below shows the fire station sites for the specific plan alternatives (the hatched areas are the school sites).

The Cooperative Plan and Alternative 1 both site the fire station adjacent to the transportation corridor on the East Parcel, the former on Valley Avenue and the latter on Junipero Street. A second Alternative 1 option ("Option A") places the fire station on Bernal Avenue, at or east of the Valley Avenue intersection. A second Cooperative Plan option (not shown) places the fire station at a Valley Avenue site on the Central Parcel.

The County specific plan (Alternative 3) sites the fire station (which would be a county, rather than a city, facility) at the same East Parcel location as the Cooperative Plan.<sup>14</sup>



The site plan for Alternative 2 does not specify a fire station site, although the land use tabulation shows it on the Central Parcel.

An offsite location of a fire station might also serve Pleasanton's needs without compromising project fire safety. (Suggested offsite locations include the three-acre site north of Bernal Avenue that the City has an option to purchase from SFWD under the provisions of the Cooperative Plan.)

Considerations relating to fire station location and siting are addressed in Chapter 5, Part G (Public Services: Fire Protection). Most options place the fire station on or easily accessible to a thoroughfare, which the Fire Department prefers; under the Preferred Plan, the Junipero Street site is on a collector. Adjacency of fire station and elementary school raises issues for the school, as discussed under Option 3, below.

<sup>14</sup> Under Alternative 3, the location of the fire station on the East Parcel site is dependent on the provision of adequate access to Sunol Boulevard via either the extension of Valley Avenue or Junipero Street. However, alternative fire station site selection processes would be conducted with the County Fire Department and Board of Supervisors to determine whether another alternative location (offsite) would better serve the project and the community. (County FEIR, p. 2-7.)

### 3. Elementary School Site

The project and alternatives all include the provision for a K-5 school. The chosen site would be purchased from SFWD by the Pleasanton Unified School District.

The site plans identify three possible sites, 10 to 11 acres in size, for the elementary school, as shown in the box at right. The Cooperative Plan and Alternative 3 combine a five-acre building site on a graded portion of the knoll on the East Parcel with a five-acre play area doubling as a neighborhood park. The Preferred Plan school site is also on the East Parcel but farther north; Alternative 2 sites the school on the Central Parcel. Alternative 3 allows this location as an alternate site.

A potential East Parcel site immediately south of the Pleasanton Middle School was not pursued due to the preference of the PUSD that the schools not be adjacent.

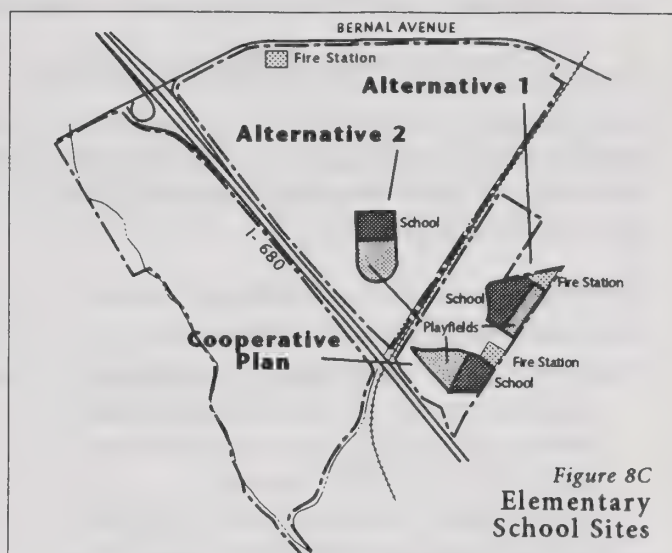


Figure 8C  
Elementary  
School Sites

Several existing and future conditions may affect the desirability of various locations for the school: proximity of (a) the I-680 freeway; (b) offsite industrial development to the east; (c) rail/transit facilities (the Union Pacific railroad and/or the Alameda County transportation corridor); (d) the existing stock pond; and (e) a possible onsite fire station. These conditions apply to the various site plan alternatives as follows:

#### Cooperative Plan and Alternative 3

Five-acre site on the East Parcel. This site is immediately northeast of the knoll, which is proposed for development as a neighborhood park with playfield. Site preparation would require substantial grading of the knoll. The graded knoll would be adequate to buffer the school from I-680.

The site adjoins the transportation corridor, which would serve to buffer the school site from the industrial uses lying to the east. Future transportation use of the corridor is discussed in Chapter 5, Part J (Transportation). If students who live east of the corridor attempt to cross it on foot, they could be exposed to moving vehicles. This potential safety impact would be addressed by fencing the corridor. Noise from transportation activities in the corridor would be lessened at the school site by the provision of an intervening landscape strip.

The existing stock pond would be immediately to the northeast of the school. Any hazardous and/or toxic materials associated with the pond would be remediated, posing no impact on the school. The pond site would be occupied by the alignment of Valley Avenue.

#### Alternative 1 (Preferred Plan)

An alternative site was identified during City Council review in January 1996: the parcel immediately south of Junipero Street between Case Avenue and the Alameda County transportation corridor. This site is farther removed from the freeway, but, like the Cooperative Plan site, adjoins the transportation corridor (see discussion above). This site was ultimately chosen for the Preferred Plan (May 1996).

#### Alt. 2 (No Golf)

Eleven-acre site on the Central Parcel. This option poses no land use or circulation disadvantages.



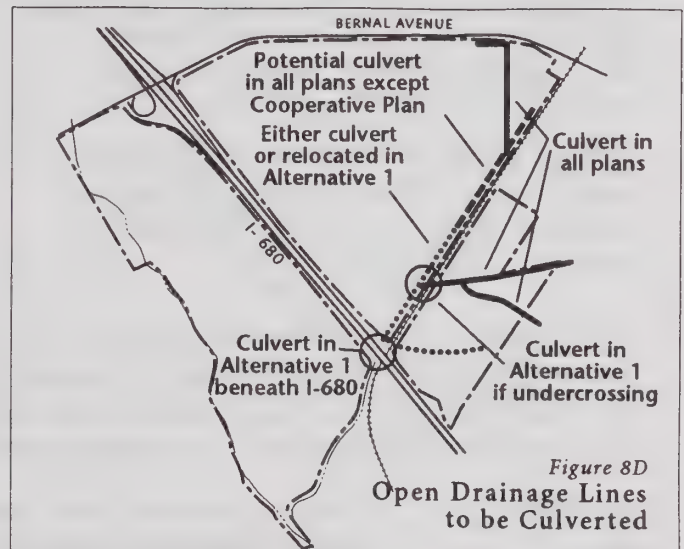
Chapter 5 addresses the potential impacts identified for the possible school sites (adjacency to transportation facilities in Chapter 5, Part E (Public Services: Education) and grading of the knoll in Chapter 5, Part N (Visual)) with one exception: potential adjacency of the fire station. Fencing would be required to assure that school children not have access to the fire station. Noise impacts of fire sirens could be disruptive to activities in classroom and play areas. This issue is discussed in Chapter 5, Part L (Noise).

#### **4. Project Storm Drainage Strategies**

The specific plan site includes lands along the Arroyo de la Laguna, which drains a portion of the basin of Upper Alameda Creek including flows from the Arroyo del Valle, the Arroyo Mocho, and Alamo Creek, and their upstream tributaries. It also includes several smaller channels which deliver local drainage to the Arroyo de la Laguna.

The specific plan has been designed to meet four principal drainage objectives:

1. Convert some open drainage ditches to culverts to provide greater flexibility in site planning and more efficient use of space (see Chapter 5, Part B (Drainage));
2. Limit increases in post-development storm drainage runoff into the Arroyo;
3. Protect West Parcel development from potential out-of-bank flooding as projected by the Army Corps of Engineers; and,
4. Accommodate a range of potential future flood control improvements by providing sufficient setback from the Arroyo to allow future right-of-way and improvement options.

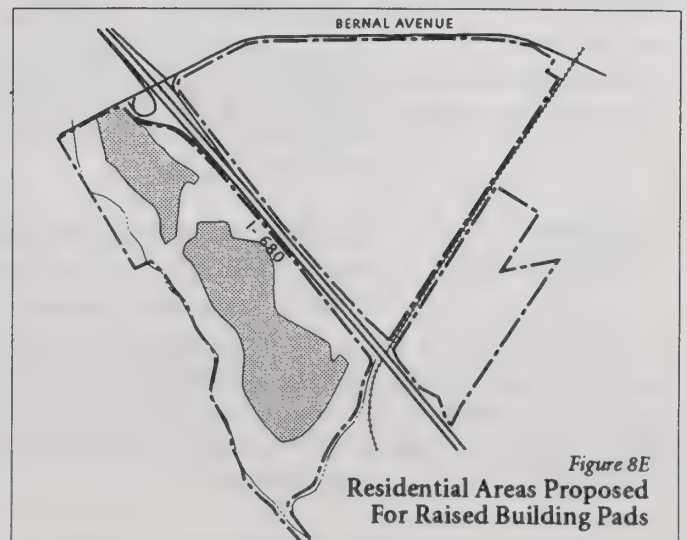


As further described in Chapter 5, the storm drainage system for the project would be designed to contain onsite increased runoff from the 100-year storm event due to development, resulting in no increase in post-development runoff in this reach of the Arroyo.

Based on the adopted FEMA 100-year flood boundary, there would be no out-of-bank flooding on the property. However, if future upstream development causes flows substantially in excess of the present FEMA 100-year flood flows, or if the Corps of Engineers 100-year flood flow estimate proves correct, flooding on the West Parcel could result if no upstream detention is provided or improvements are not made to the Arroyo.

To protect West Parcel development areas from future projected flood flows, assuming no upstream detention is provided and improvements are not made to the Arroyo, the residential building pad elevations on the West Parcel would be increased as part of mass site grading.

Elevations would be increased over existing an average of two feet at the south end of the parcel and three feet at the north end, to an elevation of approximately 312 feet at the south end and 320 feet at the north end.



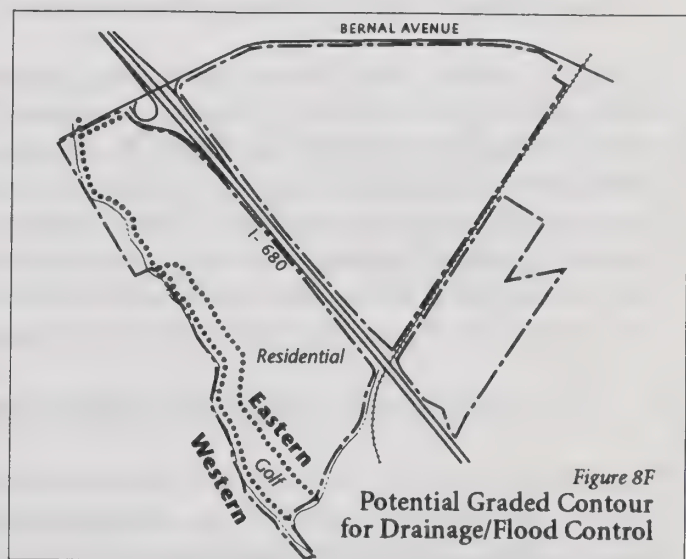
This measure would provide flood protection in excess of the nationally-accepted criteria established by FEMA (as discussed in the County EIR, p. 4.4-15). Given the increased elevation of the pads, the residential sites would no longer be located within the projected future 100-year flood plain as estimated by the U.S. Army Corps of Engineers under future buildout conditions with no upstream retention or improvements made to the Arroyo.

Consultants to the Cooperative Plan team prepared rough estimates of cut and fill volumes under the mass grading plans for the Cooperative Plan.<sup>15</sup> For the West Parcel, total earth movement was estimated at 474,000 cubic yards (cy), consisting of 125,000 cy of cut and 599,000 cy of fill. Since fill associated with noise mitigation is given as 35,000 cy, approximately 564,000 cy would be associated with raising elevations on the site. The impacts construction period traffic are discussed in Chapter 5, Part J (Transportation).

An option that may be considered in lieu of raising building pad elevations is to contour the land at the eastern (or western) edge of the golf course to a height sufficient to contain flood flows in the golf course (or the Arroyo channel).

At the north end, the raised contour would blend into the cross-section of the access road into the West Parcel from Bernal Avenue, barring flood flows either from the non-golf portion of the parcel, or from both the golf course and the residential area.

Such contouring would obviate the need for raising residential building pads and so require less fill. The preparation of the golf course site will require contouring in any event; this flood-control contour can be integrated into the grading plan on either the western or the eastern edge to result in a finished topography that looks natural.



It would also facilitate retention of existing trees adjacent to the former farm house (see discussions in Chapter 5, Part N (Visual Resources) and Part O (Biology)).

Regional flood control management options are described in Section 5 immediately following.

## **5. Arroyo de la Laguna Regional Flood Control Strategies**

The need for regional flood control improvements in the watershed of the Arroyo de la Laguna has been considered by FEMA, the Army Corps of Engineers (COE), and Zone 7. The identification of a flood control project for the Arroyo depends in part on the criterion flood to be used in project planning. Current estimates of flood flow volumes for the 100-year storm range between 17,000 cfs (cubic feet per second) and 27,000 cfs; the former represents the FEMA 100-year flood for existing upstream conditions and the latter a COE analysis that assumes buildout of the Livermore-Amador Valley with no provisions for upstream retention and/or detention. Flood flow estimates are described in Chapter 5, Part B (Drainage), beginning p. 69. The

<sup>15</sup> See Table 53 in Chapter 6, Part Q (Geology, Soils, and Seismic Safety).



27,000 cfs estimate underlies Zone 7's current analysis of alternative structural and non-structural flood control measures to address flood control needs in this reach of the Arroyo.

The proposed project has been designed to (1) provide onsite storm detention for the FEMA 100-year storm to yield no runoff increase to Arroyo de la Laguna from development of the property, (2) provide sufficient right-of-way along the Arroyo to accommodate a range of regional storm drainage improvements by Zone 7 or other public agencies, and (3) provide a grass-lined swale in the golf course to operate as a bypass channel under certain limited conditions (discussed below).

The existing bank-full capacity (water surface elevation (WSEL) of 317 feet) of the Arroyo is 17,000 cfs which corresponds to the FEMA 100-year flood elevations for the property. Capacities for the channel have been calculated for various flood flows, channel configurations, and water surface elevation. Although a WSEL of 314 was used for preliminary flood control analysis; a WSEL of 316 is now considered to be the appropriate design criterion based on upstream improvements and conditions. (Lowering the assumed WSEL at the Bernal Bridge has the effect of reducing the amount of water the channel would hold, given that the water surface would be at a lower elevation; a lowering of WSEL by three feet represents a greater capacity reduction than a lowering of WSEL by one foot).

A range of potential flood control improvements options have been identified and considered over time and some, including the possibility of creating a complete bypass channel, have been abandoned due to infeasibility or because they are inconsistent with other objectives for the Arroyo de la Laguna. The series of options reviewed in this EIR takes into account the height of the water surface at the bridge, the potential volume contained, and the possibility of diverting some flow under flood conditions. The range of options is described below, beginning with the option that represents the least modification to the channel. All of these options would have earthen side slopes that could be vegetated. The cross sections shown would have to be wider if the channel itself were to be fully revegetated under any of these options.

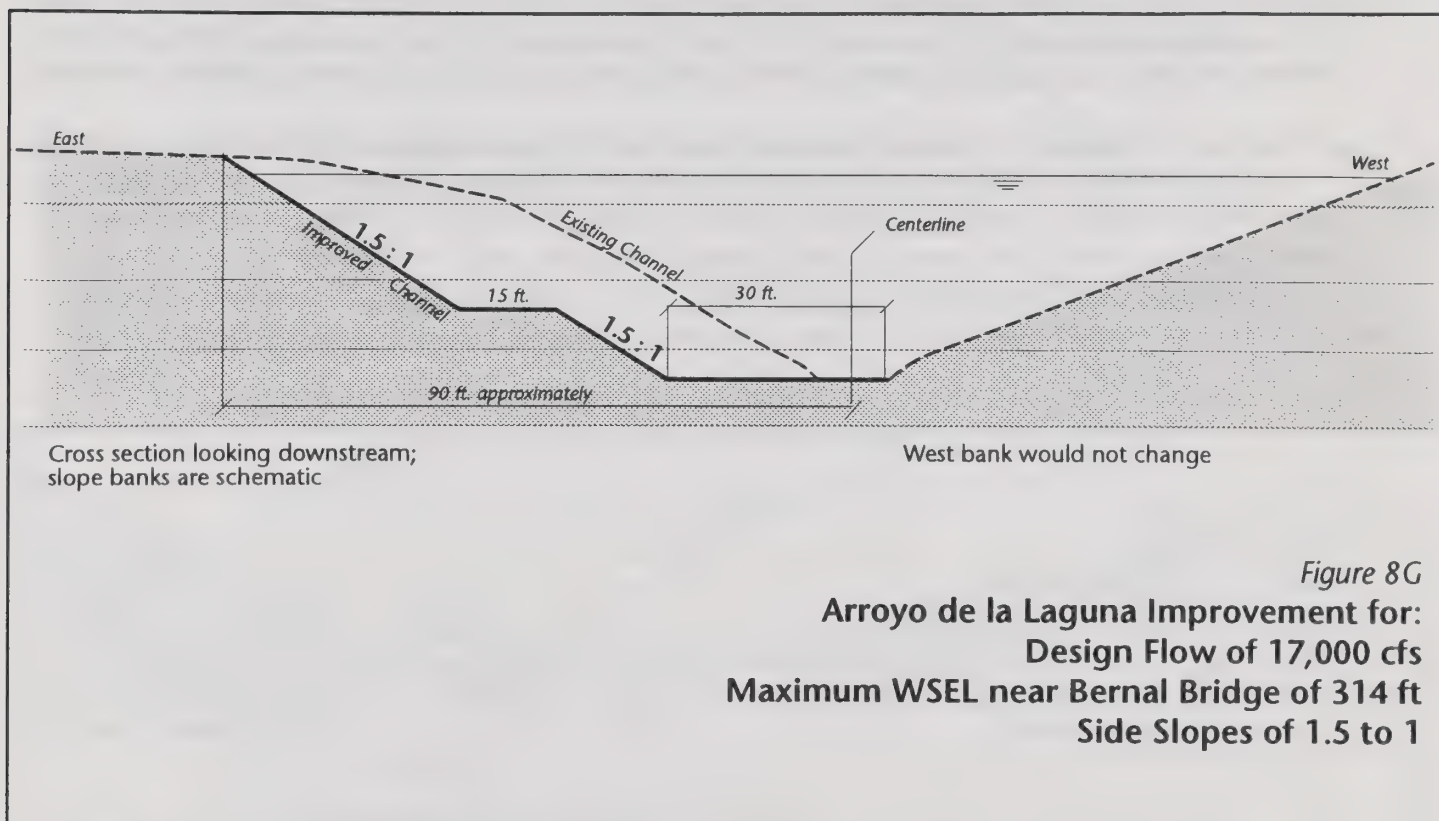
**a. Flow Volume of 17,000 CFS/Bernal Avenue Bridge WSEL of 316 Feet**

This modification would improve only that section of the Arroyo where existing capacity is significantly less than the remainder of the Arroyo. In general, this area is in the northern portion of this reach of the Arroyo, where sections of the bank have slipped over time; this condition can be corrected by removing the displaced earth. The improvement would consist of widening a short reach of the channel to a 25-foot bottom width to match other portions of the channel adjacent to the project, and providing a protected 1½ horizontal: 1 vertical slope on the east side of the channel only. This improvement would make it possible to preserve the significant trees and upland vegetation on the west side of the channel. The trees and upland vegetation on the east side would be eliminated only in the area subject to widening.

**b. Flow Volume of 17,000 CFS / Bernal Avenue Bridge WSEL of 314 Feet**

This design would contain 17,000 cfs in the channel without allowing the WSEL to rise above 314 feet at Bernal. Improvements required to meet this condition include widening the bottom width of the channel to 30 feet, providing a 1½ horizontal : 1 vertical sideslope on the east side of the Arroyo, and a 15-foot wide riverwalk/maintenance road located approximately 10 feet above the channel invert. This would result in 5 to 10 feet of widening at the bottom of the Arroyo, and result in cuts of approximately 20 to 30 feet east-erly of the existing bank. The sideslope would be lined with a gabion mattress to limit erosion.

Like option “a” above, option “b” would allow for preservation of the significant trees and upland vegetation on the west side of the channel; they would be lost along most of the easterly side of the channel. The cross-section of improvements necessary for this strategy is shown in Figure 8G.



#### c. Flow Volume of 18,500 CFS / Bernal Avenue Bridge WSEL of 316 Feet (Cooperative Plan Approach)

Flow volumes of up to 18,500 cfs can be accommodated by means of in-channel modifications supplemented by a swale within the golf course that would serve as a bypass channel.<sup>16</sup> This Cooperative Plan strategy is reviewed in Chapter 5, Part B (Drainage); Figure 14 (p. 81) is a plan of the proposed diversion swale.

For the stretch of the channel paralleled by the swale, vegetation loss in the channel would be minor because the increase in capacity needed (approximately 500 cfs) is slight. North of the diversion point, the west bank of the Arroyo is assumed to remain in its existing condition, but vegetation loss would occur on the east bank where widening occurs to increase capacity (from 17,000 to 18,500 cfs). In addition, some loss in vegetation could occur at the weir where the flow diversion would occur.

#### d. Flow Volume of 27,000 CFS / Bernal Avenue Bridge WSEL of 316 Feet (Zone 7 Standards for East Side of Channel)

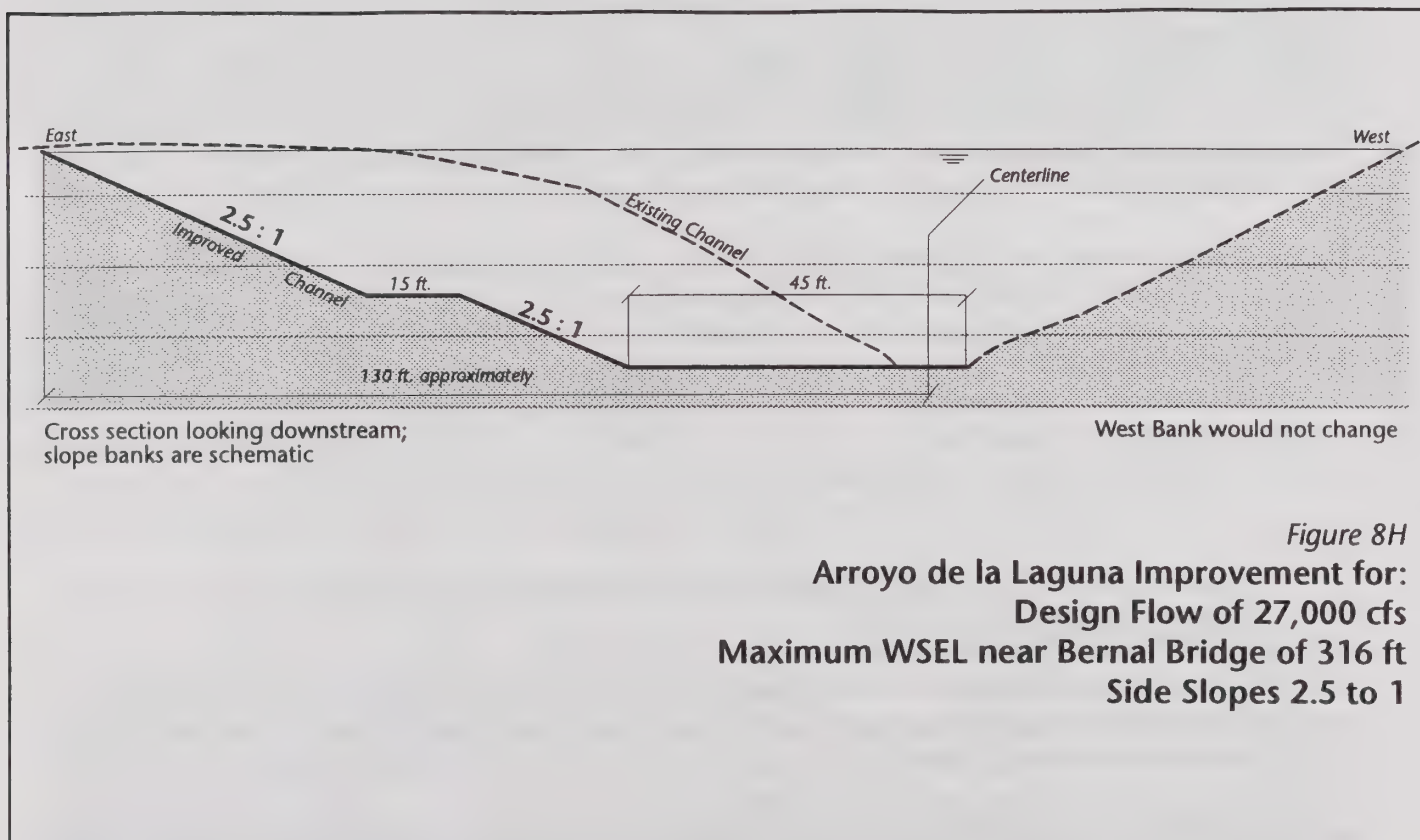
This alternative consists of an earthen channel designed to Zone 7 improvement criterion with 2½ horizontal : 1 vertical side slopes. In order to improve the channel under this design to accommodate the

<sup>16</sup> *Cooperative Plan Recommendations* (cited at footnote 6 in Chapter 2), pp. 5-6. The swale, with a capacity of 1,000 cfs, would be utilized when flows exceed 17,500 cfs but are not greater than 18,500 cfs. Conditions applicable to this option are described in Chapter 5, Part B (Drainage), Footnote 35.



COE estimated 100-year future flood flow conditions of 27,000 cfs and maintain a maximum WSEL of 316 feet, the channel would need to be widened to provide a 45-foot bottom width. A 15-foot wide river-walk/maintenance road would be located approximately 10 feet above the channel invert. This alternative would place the top of bank on the east side of the channel about 130 to 140 feet from the centerline of the existing stream, causing cuts of approximately 60 to 70 feet easterly of the bank. Alternatively, the river-walk/maintenance road could be provided at the top of the channel, reducing the required channel widening.

Like options "a" through "c" above, this option would allow for preservation of the significant trees and upland vegetation on the west side of the channel, but the trees and upland vegetation would be lost along all of the easterly side. Figure 8H shows a typical cross-section of the improvements necessary for this option.



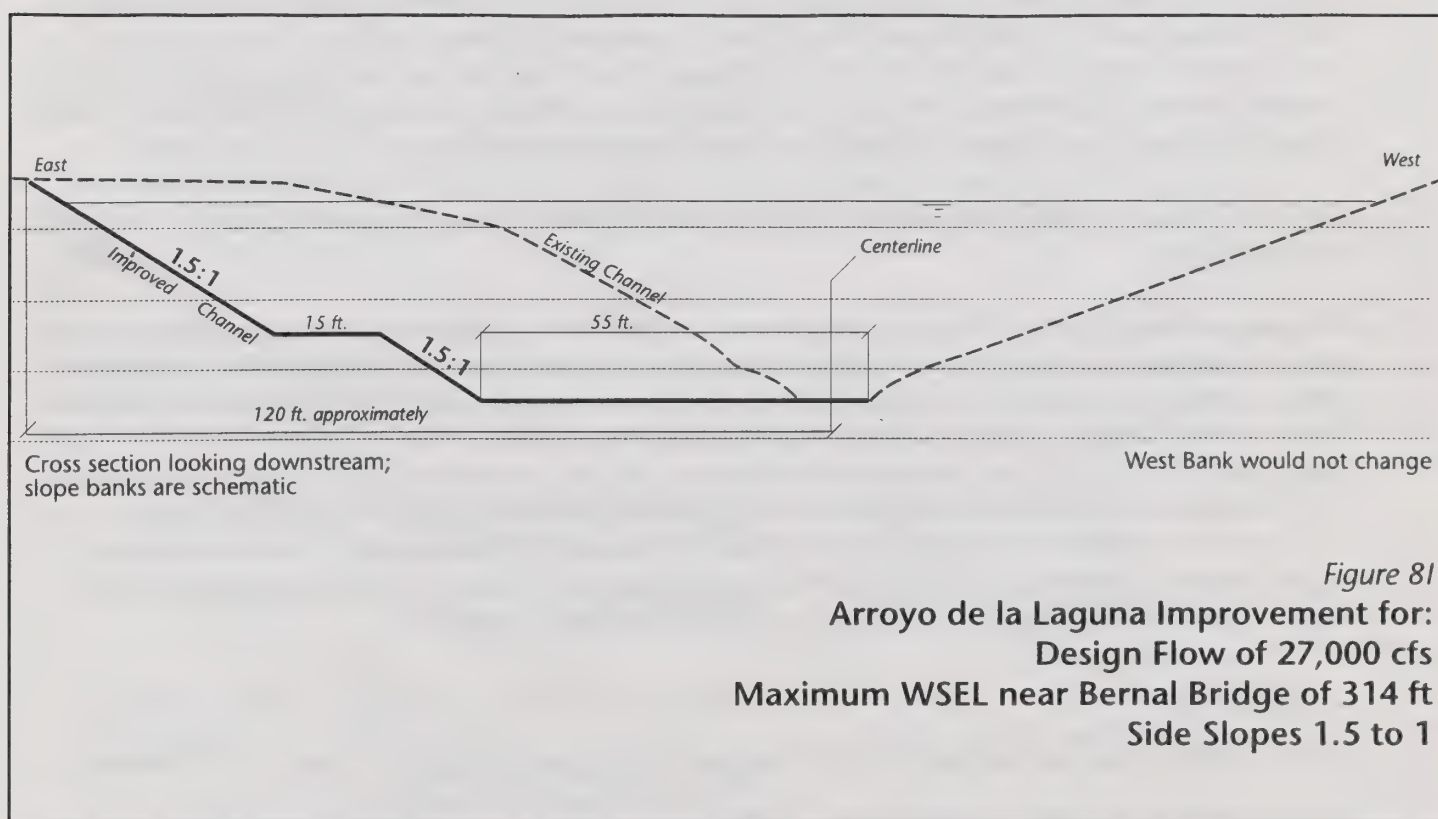
**e. Flow Volume of 27,000 CFS / Bernal Avenue Bridge WSEL of 314 Feet  
(Modified Standards)**

Another option was explored to improve the channel to accommodate the COE estimated 100-year flood flows under future buildout conditions of 27,000 cfs flow. The improvement identified for this option involves a wider channel bottom than option "d" and steeper side slopes: the Arroyo would be widened on the east side to provide a 55-foot bottom width with a  $1\frac{1}{2}$  horizontal:1 vertical side slope on the east side. This would result in 25 to 30 feet of widening on the bottom of the Arroyo. A 15-foot wide riverwalk/maintenance road would be located approximately 10 feet above the channel invert. The side slope would be lined with a gabion mattress to limit erosion.

This configuration would increase capacity of the Arroyo to approximately 27,000 cfs with a maximum WSEL of 314 feet at Bernal. This alternative would place the top of bank on the east side of the channel about 120 to 130 feet from the centerline of the existing stream, causing cuts of approximately 55 to 60 feet easterly of the existing top of bank. It is estimated that approximately 96,000 cubic yards of excavation would be necessary for this channel widening. Alternatively, the maintenance/pathway could be provided at the top of the channel, thus reducing the required channel widening.

If the design were to maintain a WSEL of 316 feet at Bernal, the bottom and top of the required channel widening would be considerably less.

Like options "a" through "d" above, this option would allow for preservation of the significant trees and upland vegetation on the west side of the channel, but the trees and upland vegetation would be lost along all of the easterly side. Figure 8I shows a typical cross-section of the improvements necessary for this option.



#### g. Decision on Flood Control Option

The implementation of an in-channel flood control project would be the responsibility of Zone 7. The choice of a flood control project, and the evaluation of impacts if such a project proceeds to the implementation stage, would be addressed in an EIR to be prepared by Zone 7, independently of the specific plan EIR. As indicated in Chapter 5, Part B (Drainage), because the specific plan would accommodate multiple options as described above, no adverse impacts relating to flood control are found as a result of the project.



## **6. Valley Avenue Options**

Valley Avenue north of the project site currently extends southward to intersect Bernal Avenue at a “T” intersection opposite the Bernal property. All of the alternatives currently under consideration include (1) an alignment of Valley Avenue on the Central Parcel that begins, in the north, at the existing Bernal Avenue/Valley Avenue intersection, (2) the extension of Valley Avenue southeasterly beyond the Central Parcel to connect with the circulation network on the East Parcel, and (3) a crossing of the Union Pacific Railroad tracks to allow the connection between the two parcels. Choices for Valley Avenue can therefore be described under three general headings: alignment, extension, and rail crossing.

### **a. Alignment**

Under the Cooperative Plan, the alignment of Valley Avenue on the Central Parcel would extend from Bernal Avenue east of the I-680/Bernal Avenue interchange to the I-680 freeway on a direct path almost due south. It would then continue along (next to) the I-680 freeway. At the southern end of the Central Parcel, Valley Avenue would (1) intersect with Pleasanton Avenue and (2) cross the Union Pacific tracks to the East Parcel. In a southern alignment on the East Parcel, it would skirt the northern base of the knoll, where it would intersect Case Avenue extended. This alignment and proposed adjoining residential layout would make this street a “thoroughfare,” with no directly fronting residential uses.

This configuration would be consistent with the 1996 Pleasanton General Plan (see General Plan Figure III-5, p. III-36).

Other options would align Valley Avenue farther away from I-680 on the Central Parcel and farther away from the knoll on the East Parcel. In these alignments, the roadway would be planned as a residential collector street, with residential uses directly fronting on and using the street. However, traffic loads on Valley Avenue in these alignments would exceed Pleasanton’s General Plan guideline of 2,000 to 3,000 average daily trips (ADT) for neighborhood collectors. The site plans allow for the frequent interposition of traffic circles that would result in lower traffic speeds and, therefore, improved safety conditions. However, traffic volumes of the levels projected may still not be considered acceptable for residential streets. If so, the concept of residences fronting those streets and accessed by driveways from those streets may not be feasible, and a different design for adjoining residential areas may be required.

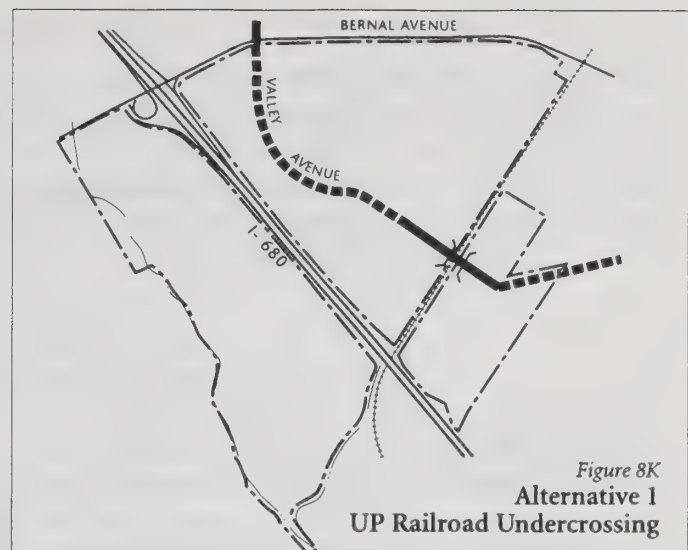
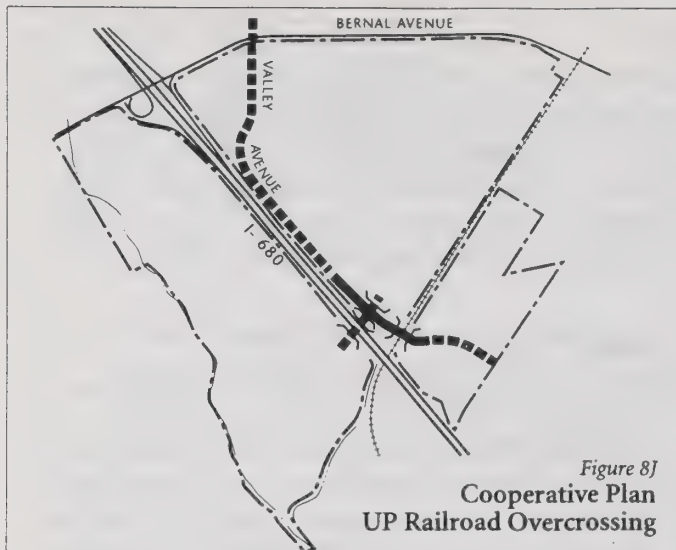
### **b. Extension**

The proposed project would extend Valley Avenue eastward through the Central Parcel to the East Parcel.

For the option under which Valley Avenue on the Central Parcel is aligned along I-680, Valley Avenue would occupy a southern alignment on the East Parcel. From its intersection with Case Avenue, it could continue eastward across the Alameda County transportation corridor to extend to an intersection with Sunol Boulevard; from there, a further eastward route along Sycamore Road would provide a continuous connection between the central and southeastern parts of the City. (The potential extension east of the transportation corridor would not be part of the specific plan project.)

For the option under which the alignment of Valley Avenue on the Central Parcel is more remote from I-680, a connection to the East Parcel would be made farther north: Valley Avenue would be extended to intersect Junipero Street (recently extended to Case Avenue).

Under this option, a continuous circulation route between southeastern Pleasanton and the Bernal property would be provided by the combination of Valley Avenue and Junipero Street.



### c. Rail Crossing

Any extension of Valley Avenue from the Central Parcel to the East Parcel would require a crossing of the Union Pacific tracks. The principal choices are (a) crossing next to I-680 vs. crossing remote from I-680 (roughly 2,000 ft. northeasterly of I-680), and (b) type of crossing – overcrossing vs. undercrossing vs. at-grade crossing

Crossing considerations are summarized in the two-part table below, which address (*Part I*) location with respect to I-680 and (*Part II*) considerations with regard to the type of crossing (overcrossing, at grade crossing, or undercrossing).

#### Considerations Relating to Valley Avenue Crossing of Union Pacific Railroad Tracks, *Part I: Location of Railroad Crossing with Respect to I-680*

Consideration	Adjacent: OC (Overcrossing) Only	Remote OC (Overcrossing), At Grade, or UC (Undercrossing)
type of crossing	UC probably not physically feasible	UC feasible
cost factors	UC prohibitively costly OC next to I-680 could utilize knoll topography and need less fill	All crossing types possible; UC likely to be most costly
type of crossing	UC probably not physically feasible	UC feasible
constraints on adjoining land use	OC adjacent to freeway represents a land use constraint on only one side of each road (west side of I-680 and east side of Valley Avenue)	OC remote from freeway means that both I-680 and Valley Avenue would constrain adjoining land use on both sides; would require golf course redesign
accommodation of other infrastructure elements	If bridge is next to freeway, OC could cross over both tracks and local street OC next to I-680 would facilitate future eastward extension of Valley Avenue	OC would require a “bend” in Pleasanton Avenue so that the approach would meet Pleasanton Avenue at grade
noise	Traffic noise masked by freeway	OC and at-grade have greater traffic noise impact than UC



Consideration	Adjacent: OC (Overcrossing) Only	Remote OC (Overcrossing), At Grade, or UC (Undercrossing)
appearance	From east and north, bridge visually blends into freeway profile; View from NB I-680 bridge into site partially obstructed	Long approach ramps required for OC would be highly visible

## Part II. Type of Railroad Crossing

Consideration	Type of Crossing		
	OC (Overcrossing)	UC (Undercrossing)	At-grade
horizontal approach	1,600 feet from ramp end to ramp end	1,200 feet from ramp end to ramp end	None
vertical profile	Vertical clearance of 23 feet; elevation would be 2 to 4 feet lower than I-680	Vertical clearance of 16 feet	Not applicable
rail operations	Construction would not require interruption of railroad operations	Construction would require temporary rail bypass ("shoo-fly")	Potential for grade crossing accidents may affect operations indirectly; PUC approval doubtful
pedestrian crossing: ◦feasibility	OC is longest pedestrian route (due to height of bridge)	Shorter than OC (because OC height exceeds clearance required for UC)	Feasible but less safe
◦likely use	Distance and slope (26 ft. rise via 6% slope) may discourage OC use by pedestrians	Distance and slope (12-foot drop via 3% slope) may discourage UC use by pedestrians; lack of visibility presents a security issue	Would be used, but raises safety issues
cost factors	More construction needed for longer approach route	Highest cost; more excavation required; drainage bypasses needed; extensive negotiations with railroad may be required	Lowest cost
accommodation of other land uses	Long access slope makes fronting uses infeasible	UC eliminates possibility of fronting uses	Maximum flexibility for adjoining land uses
accommodation of other infrastructure elements	Roadway bridge could cross over local street connecting West and Central Parcels	Would require relocation or fill of drainage line along railroad track	Structure over drainage channel along track would be needed or drainage line would have to be culverted
noise	Traffic noise greatest for elevated roadway	Traffic noise least for sub-grade roadway	Trains are required to whistle at grade crossings
appearance	Visually prominent if not next to freeway (see table above)	Not visually prominent	Not visually prominent

## 7. Bernal Avenue Intersections

Bernal Avenue marks the northern edge of the site along West, Central, and East Parcels. The number and location of access routes from Bernal Avenue into the Parcels are the same for the alternatives being considered in this EIR. On the West Parcel, the project and all alternatives show a single public access route from Bernal, located opposite Meadowlark Drive (the public street giving access to the Laguna Oaks development to the north). On the East Parcel, the project and all alternatives show a single public access route from Bernal: Case Avenue, which fronts Pleasanton Middle School on the East Parcel.

Access from Bernal Avenue to the Central Parcel differs in line with differences in the land use and circulation plans for the alternatives. The access option for each alternative is consistent with the internal circulation requirements of that alternative. The project and Alternatives 2 and 3 each would have three full intersections with Bernal Avenue; Alternative 2 as first configured (May 1996) had only two full intersections, but the "Revised Preferred Plan" (February 1997) would have three full intersections. Options offering only two intersections have been eliminated as not meeting Pleasanton circulation needs.

## 8. View Potential from I-680 Looking Northeast at Edge of Site and from Bernal Avenue Looking South

The Central and West Parcels encompass the most extensive area of undeveloped land close to central Pleasanton. City residents as well as motorists on Bernal Avenue and on the I-680 freeway have long enjoyed the unencumbered vistas of open fields and scattered mature trees that these lands offer. As described in Chapter 5, Part N (Visual Resources), the visual resources on the site and visible from the site have been identified in numerous previous studies:

The *West Parcel* site plans propose a visual and noise buffer between the freeway and residential development consisting of part of the golf course together with a noise barrier consisting of a landscaped sound berm or a berm/wall combination). The barrier may be next to the freeway or set back next to the homes. Differences in the noise and visual effects of these choices are addressed in Chapter 5, Part L (Noise) and Part N (Visual Resources) respectively.

The *Central Parcel* is the focus of the discussion that follows; much of the discussion as it relates to I-680 also apply to the West Parcel.

The *East Parcel* is visually isolated from the freeway by the knoll at its southern end and its Bernal Avenue frontage is already developed. The alternatives are equivalent in terms of visibility into and beyond the Parcel.

### a. Views toward the Central Parcel from I-680

I-680 passes between the West and Central Parcels on an elevated alignment that crosses over the UPRR tracks at the south end of the site and over Bernal Avenue at the north end of the site. Due to the elevation of the freeway at these locations, extensive vistas are offered into and beyond the site. The view is especially striking from northbound lanes of I-680 through and over the central portion of the Central Parcel toward the hills leading to Mt. Diablo in the distance, with developed Pleasanton in the foreground. This is a visual gateway to Pleasanton, and a view identified in earlier studies as important to the city.

The site plan options that affect this view are described in the table below.

Summary of Site Plan Options Affecting Views into Interior of Central Parcel from I-680					
Land Use/Development Features Next to Freeway	"Project" (Cooperative Plan)	"Variant" of Project Jan. 1996	Alternative 1 (Preferred Plan)	Alternative 2 (No Golf Course)	Alternative 3 (County Spec. Plan)
freeway noise barriers	landscaped noise berm remote from freeway, meandering between golf fairways	no noise barrier at freeway edge; possible berm within golf course	landscaped noise berm remote from freeway, meandering between golf fairways	landscaped noise berm at edge of freeway	landscaped noise berms topped by soundwalls between freeway and Valley Ave.



Summary of Site Plan Options Affecting Views into Interior of Central Parcel from I-680					
Land Use/Development Features Next to Freeway	"Project" (Cooperative Plan)	"Variant" of Project Jan. 1996	Alternative 1 (Preferred Plan)	Alternative 2 (No Golf Course)	Alternative 3 (County Spec. Plan)
Valley Avenue alignment	adjacent to I-680	adjacent to I-680	distant from I-680	distant from I-680	adjacent to I-680
Valley Avenue railroad crossing	adjacent to I-680	adjacent to I-680	distant from I-680	distant from I-680	adjacent to I-680
open space	driving range and golf hole along Valley Avenue next to I-680; view into these areas partially obstructed protective netting	golf hole and driving range east of Valley Avenue; netting along driving range would be seen from I-680	driving range and golf hole(s) along I-680; view into golf course not obstructed; netting along driving range would be seen from I-680	landscaped corridor along I-680, approx. 100 to 150 feet in depth; view into interior areas obstructed by noise berm	combination of noise berm and transparent soundwall (total height of 16 ft.) would obstruct views into golf course
residential use	closest residential units approx. 600 feet from I-680	closest residential units approx. 450 feet from I-680	closest residential units approx. 425 feet from I-680 behind distant noise berm	closest residential units approx. 125 feet from I-680; view obstructed by noise berm adjacent to I-680	closest residential units approx. 600 feet from I-680

Two of the options seem, at first glance, to offer better prospects for I-680 views into the Central Parcel:

- Preferred Plan:
- (1) the noise mitigation berms and walls would be set farther back from the freeway along the meandering alignment proposed under the Cooperative Plan, so that the view into the site is not obstructed at the edge of the freeway,
  - (2) the near view of the golf course is not made more distant by a Valley Avenue alignment along I-680 or obstructed by a Valley Avenue bridge over the Union Pacific tracks next to the freeway, and
  - (3) the residential uses in the interior of the site are farther away than is the case under Alternative 2.

- Project "Variant":
- (1) no noise mitigation berms and walls are proposed along I-680, and,
  - (2) the near view into the project is of golf-related uses.

However, each of these arrangements poses difficulties. For options in which noise berms/walls do not separate the freeway from golf uses, some other kind of barrier (whether a wall or netting) would be necessary to address safety and liability considerations, and this barrier, too, could be a visual obstacle (or be unattractive), while the lack of a noise barrier would be detrimental to the quality of play on the golf course.

Further, a considerable effort has been made to design a noise barrier that offers some "transparency" in the view from the freeway: the concept is to use transparent panels for the top eight feet or so of the noise wall, spacing those panels between noise berms so as to provide view corridors into the golf course, as well as over and beyond the Parcel. This concept was explored for the County specific plan and could be incorporated into any plan with sound berms.

Taking all these factors into account, no clear visual advantage pertains to any one of the options described, while Alternative 2 presents the least favorable condition: residential use and sound berms adjacent to the freeway for nearly the entire length of the property.

### **b. Views into and Beyond the Central Parcel from Bernal Avenue**

Bernal Avenue between its interchange with I-680 and Pleasanton Avenue represents one of the City's principal gateways. The SFWD Bernal property is an open area on the south side of Bernal Avenue. On the north side, the Alameda County Fairgrounds occupies the majority of the northern frontage of Bernal. Fairgrounds uses are set back from Bernal and most of the fairgrounds area is planted with trees. The predominantly green appearance of fronting uses, the street trees along both sides of Bernal and in the median, and the view over the Central Parcel to the hills south of urban Pleasanton give this route considerable scenic appeal.

The site plan options that affect these scenic resources are summarized in the table on the following page

The provision of golf course and community park use along Bernal under the Preferred Plan gives this option the most "green" perspective from Bernal Avenue. For portions of the Bernal frontage proposed to be developed, the character of the development under all options (e.g., whether the type of development proposed is office, retail, residential, civic, open space) is less important than the scale of buildings (small buildings are less obstructing of views), the orientation of buildings (narrow frontages along Bernal are less obstructing), setbacks from Bernal to buildings (deep setbacks are less obstructing), and the amount of open space between buildings (wide open spaces between buildings are less obstructing).

Impacts of the alternatives are reviewed in Chapter 5, Part N (Visual Resources).

Summary of Site Plan Options Affecting Views into and Beyond the Central Parcel from Bernal Avenue				
Land Use/Development Features Next to Bernal	Project (Cooperative Plan,)	Alternative 1 (Preferred Plan)	Alternative 2 (No Golf Course)	Alternative 3 (County Spec. Plan)
land use	principally commercial; civic at east end	golf and park/civic account for more than 50 percent of Bernal frontage, balance is commercial; possible additional park/ civic uses along Bernal would increase potential "green" vista	office commercial, village commercial, and open space, approximately one-third each	same as Cooperative Plan
scale of buildings	several large buildings in commercial area	potential for large buildings in commercial areas	potential for large buildings in commercial areas	same as Cooperative Plan
setback to buildings	setback of 50 feet along Bernal; largest/widest buildings are further set back behind parking areas	setback along Bernal includes 12-foot landscape strip in Village Center	unspecified setback along Bernal in commercial areas	same as Cooperative Plan
overall "transparency" of views from Bernal	mid-range	high	mid-range	low



## **9. Retention of Natural Features**

The specific plan area has several natural features identified in Figure 38, p. 277. Each is described below.

### **a. Description of Features**

**(1) The Knoll.** The most prominent of the site's natural features is a hill (elevation 80 feet) commonly referred to as "the knoll." The knoll is located at the southernmost point of the East Parcel. Most of the knoll is grassland; there are also numerous trees, of which approximately five qualify as heritage trees (see discussion in Chapter 5, Part O (Biology)).

**(2) Pond.** Approximately 1.02 acres of low-lying land northeast of the knoll is described as a pond with a well-defined area; it is also identified as a potential jurisdictional wetland. The pond is thought to have originated as a detention basin. It is commonly referred to as the "cow pond" or the "stock pond." At the time the EIR biologist visited the site, it was denuded of vegetation, making it impossible to determine what habitat value it might have at other times of the year, once any soil contamination condition is remediated (see Chapter 5, Part O (Biology) and Part P (Public Health and Safety)).

**(3) Willow Grove.** A cluster of willow trees in a well-defined grove is located north and west of the pond just described.

**(4) Finger Tributary.** There is a cut-off channel to the east of the main channel of the Arroyo just south of the Bernal Avenue bridge. Vegetation in the channel is associated with the upland riparian habitat area of the Arroyo de la Laguna; the channel is edged by numerous large trees, some in excellent condition but most of marginal value. The channel has been largely undisturbed by agricultural use.

Various alternative plans would use this dry channel and the finger of land between it and the Arroyo as park land, golf course, and/or residential.

### **b. Treatment of Natural Features under Site Plan Alternatives**

The natural features described above are treated differently under the land use arrangements of the project and alternatives. These differences are summarized in the table below.

Summary of Site Plan Options Affecting Natural Features of the Site				
Natural Feature	"Project" (Cooperative Plan)	Alternative 1 (Preferred Plan)	Alternative 2 (No Golf Course)	Alternative 3 (County Spec. Plan)
1. knoll	northern half graded to create site for school and playfield; balance in open space; existing trees lost	entirely in open space; trees retained	entirely in open space; trees retained	same as Cooperative Plan
2. pond	to be drained and filled to create site primarily for the future alignment of Valley Avenue	open space	open space	same as Cooperative Plan
3. willow grove	residential use	open space/park	open space	same as Cooperative Plan

Summary of Site Plan Options Affecting Natural Features of the Site				
Natural Feature	"Project" (Cooperative Plan)	Alternative 1 (Preferred Plan)	Alternative 2 (No Golf Course)	Alternative 3 (County Spec. Plan)
4. dry channel and "finger" area	dry channel to be used for park/open space; finger of land to be used for residential	northern half of channel to be filled; area together with finger of land to be used for residential	dry channel to be used for park/open space; finger of land to be used for residential in north and park/ open space in south	same as Cooperative Plan
Note: The site plans of the alternatives are at a conceptual level; therefore, differences among alternatives regarding treatment of site features is subject to change if it should be found that a particular arrangement will not meet the specifications of the Cooperative Plan Agreement.				

Impacts of these options are reviewed in Chapter 5, Part O (Biology) under the alternatives to which they apply.



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## CHAPTER 5

### SETTING, IMPACTS, AND MITIGATION MEASURES

The proposed CEQA project is a rezoning preliminary to annexation of a site of approximately 560 acres, as described in Chapter 2 of this report. This chapter describes the setting of the project and the impacts of the project – based on the Cooperative Plan and the Preferred Plan (Alternative 1) – on a series of environmental topics. Where impacts for Alternatives 2 would be different from those of the Cooperative Plan and the Preferred Plan, those differences are described qualitatively at the end of each “Impacts” subsection. The impacts of Alternative 3 (the County-approved plan) are described in the County EIR (SCH # 94103029).

#### A. LAND USE

##### 1. Project Characteristics

All of the project alternatives would permit the development of residential, commercial, office, and other urban uses on a site that is currently used for agriculture. The Cooperative Plan, Preferred Plan, and Alternative 3 all would include a golf course as an integral part of the land use mix.

Table 4 (pp. 28-29) and Figures 4, 5, 6, and 7 (pp. 31-34) present the land use and siting characteristics of the project and alternatives.

##### 2. Setting

The following summary of the land use setting is based in part on information presented in Environmental Baseline Report, City and County of San Francisco,<sup>17</sup> the (uncertified) EIR on Pleasanton’s proposed annexation of SFWD lands,<sup>18</sup> and the Draft and Final EIRs on the adopted county specific plan (cited in footnote 1).

The project area is located approximately one mile southwest of downtown Pleasanton and adjacent to Interstate 680 (I-680), in a portion of unincorporated Alameda County that is adjacent to the City of Pleasanton’s boundaries. The project area is one of the largest, centrally located, undeveloped sites within the East County Urban Growth Boundary as designated in Alameda County’s East County Area Plan (ECAP).

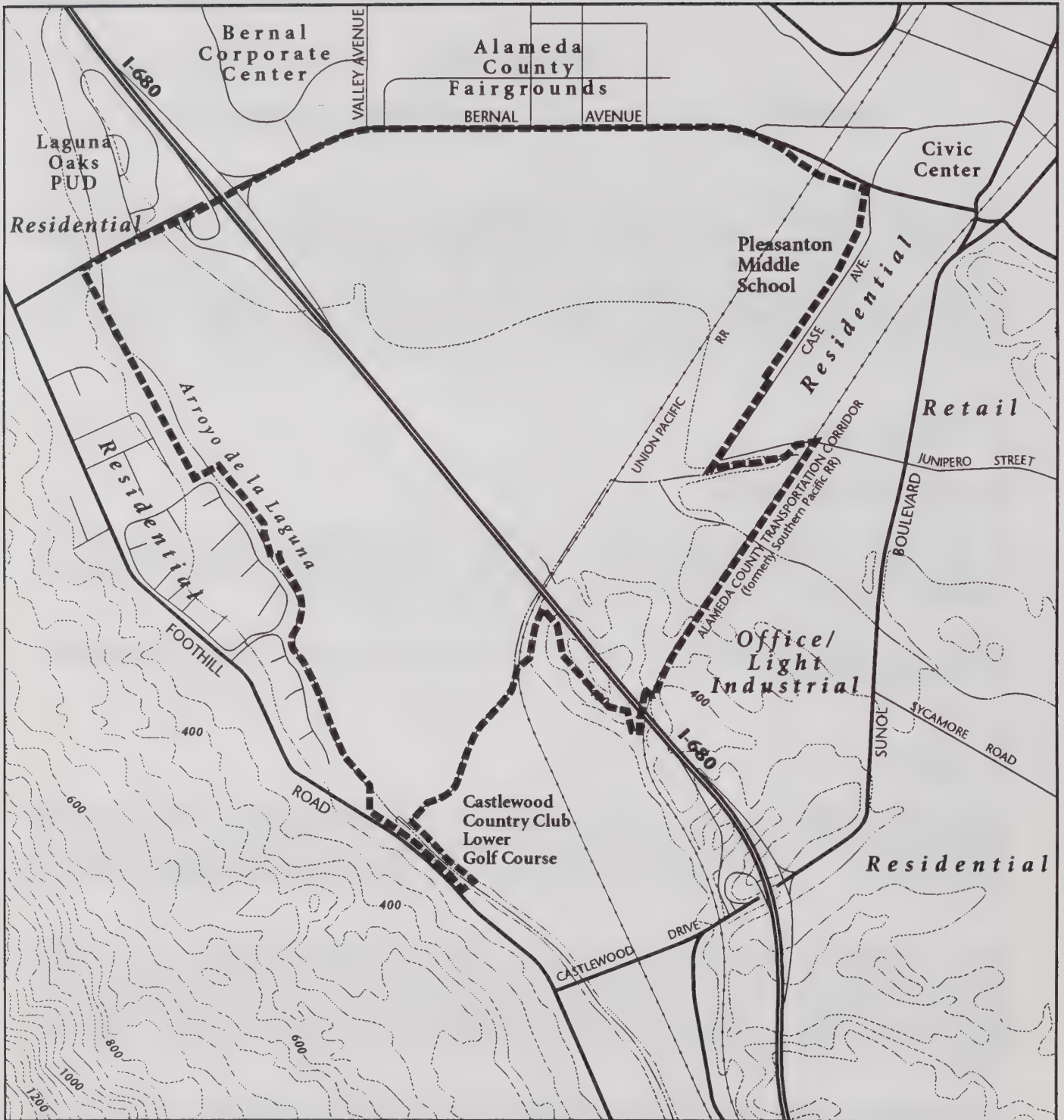
Although the study area itself is largely undeveloped, it lies within an urban setting that is predominantly developed. Figure 9 (p. 54) shows the site and its land use context. Figure 10 (p. 55) is an aerial photograph of the EIR study area.

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<sup>17</sup> *Environmental Baseline Report*, San Francisco Water Department Specific Plan for San Francisco Public Utilities Commission Lands in the City of Pleasanton, November 1988.

<sup>18</sup> See footnote 15.



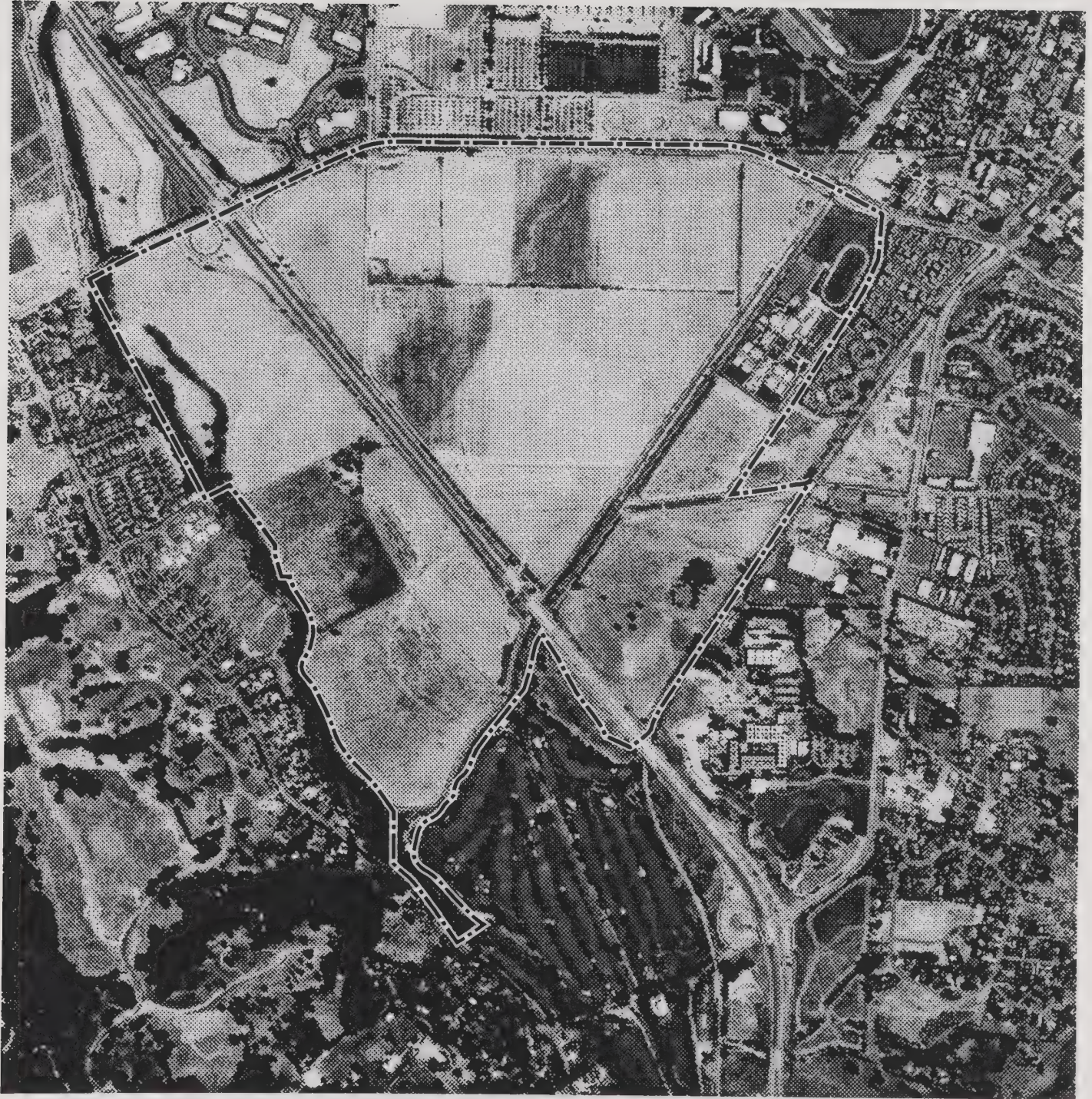


Source: Environmental Baseline Report (full citation in Chapter 9), p. 14.



Figure 9  
Land Use Context





*Figure 10*  
**Aerial Photograph of Site and Adjacent Area**



The Cooperative Plan Recommendations also provide an option to the City of Pleasanton purchase the site immediately west of the 20-acre community park for community and cultural arts uses. The purchase would be made at fair market value based on the underlying zoning designation. This option expires on December 31, 1997.<sup>19</sup> City purchase of the land would give Pleasanton greater flexibility in the siting of civic and public land uses, particularly along Bernal Avenue.<sup>20</sup> The option to purchase additional land for public use does not pose any environmental impacts beyond those of the underlying uses proposed.

As noted in Chapter 2, the majority of the EIR study area site is owned by the San Francisco Water Department (SFWD). The SFWD acquired the project area in the 1930s for use as a well field to provide water to San Francisco and surrounding municipalities. Over the years, most of the older wells have been gradually phased out, although some are still productive. San Francisco continues to provide water (from wells outside the project area) to the Castlewood Country Club, which is located south of the project area, pursuant to a long-standing agreement (see p. 97). The balance of the study area is in various public ownerships as indicated in Table 1 (p. 4). The portion of the study area owned by San Francisco includes three subareas – the West Parcel, the Central Parcel, and the East Parcel – as described in Chapter 2.

#### **a. Existing Land Use on Neighboring Properties**

Land uses on neighboring properties are described in a clockwise direction, beginning to the west:

**West** ■ West of I-680 and south of the West Parcel is the Castlewood Country Club's "Valley" golf course, an 18-hole golf course, tennis and swimming facility open only to members. The Castlewood residential subdivision (in unincorporated Alameda County) is developed with approximately 200 homes, with potential for approximately eighteen additional homes.

West of the West Parcel and south of Bernal Avenue lies low to high density residential development concentrated along Foothill Road. North of the West Parcel and west of I-680 is the Laguna Oaks Planned Unit Development (approved April 1989), consisting of 251 residential units and associated open space. The portion of this project that lies directly opposite the West Parcel has been developed as a small lot, single-family detached project of 90 units known as "Windsor." The balance of the Laguna Oaks project lies westerly of Arroyo de la Laguna and consists of large lot single-family homes.

**North** ■ North of Bernal Avenue and east of I-680 is the Bernal Corporate Center (formerly Koll Business Park), a 99-acre business park project. The main entry to the business center is off Bernal Avenue about mid-way between I-680 and Valley Avenue. Approximately 180,000 square feet of office space has been completed on the site in several low-rise buildings, along with landscaping and open space improvements. An additional 230,000 square feet of commercial space is under construction. A hotel has been approved, and there is potential for 466,000 square feet of research and development/light industrial space to be developed, for a total of about 885,000 square feet of development.

The Alameda County Fairgrounds lies north of the Central Parcel between Valley Avenue and the Union Pacific railroad tracks. The fairgrounds is a 266-acre facility that includes a race track, stables, picnic and meeting facilities, an amphitheater, and outdoor recreation facilities such as tennis, minia-

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<sup>19</sup> *Cooperative Plan Recommendations* (cited at footnote 6 in Chapter 2), p. 4.

<sup>20</sup> The Cooperative Plan Recommendations offered the City a similar option with respect to the three-acre SFWD parcel north of Bernal Avenue immediately west of Old Bernal Avenue (outside the specific plan area).

ture golf, and lawn bowling. Use of the fairgrounds is at its annual high in June and July, when the County Fair is held. At that time, there is live horse racing on the race track. The fairgrounds also offers satellite racing and a pari-mutuel betting facility. County administrative offices and community buildings are also located on the fairgrounds. Activities on the site outside of the County Fair period include crafts fairs, car and RV shows, home shows, and swap meets.

The Pleasanton Civic Center is located just northeast of the northeastern corner of the study area. The complex includes a new library, police department facilities, and City of Pleasanton offices. Downtown Pleasanton is less than one mile northeast of the site.

**East** ■ East of the project area, residential development extends from Bernal Avenue southward. A mixed income housing development, Civic Square (262 units), occupies the area east of Case Avenue and south of Bernal Avenue, adjacent to the project area on the northeast. Ridge View Commons (200 units of senior housing, of which 120 units are reserved for low-income and 80 units for very-low-income households) lies south of Civic Square adjacent to the project area's eastern border. At the intersection of Case Avenue and Junipero Street an affordable housing project, The Promenade (146 units of mixed-income family apartments), is under construction.

South of the residential area is an area of mostly industrial and office uses, including Richert Lumber, Hüls America, the Kaiser Aluminum offices, and Proficient Foods. Hüls America, located at 5555 Sunol Boulevard, produces and markets pigment dispersions (known as colorants) used by the paint manufacturing and paint retailing industries. Their manufacturing process involves conversion of dry pigment materials into fluid pigment formulations, or "dispersions," which, in turn, are used by paint manufacturers to tint or color paint products. Hüls does not manufacture, formulate, tint or otherwise handle any paint products at this facility.

## **b. Existing Land Use Onsite**

Agricultural use currently occupies most of the project site.

Some of the farm-related buildings reported on the site in 1986<sup>21</sup> have since been removed. The largest structure in the study area is the Pleasanton Middle School, at 5001 Case Avenue. The school occupies part of a 29-acre site that was purchased by the Pleasanton Unified School District from SFWD in 1988.

Transportation facilities also constitute a major use of the site. Road links include Bernal Avenue at the northern edge of the study area and Interstate 680 (I-680), which crosses the site in a southeast-to-northwest direction (dividing the West Parcel from the Central Parcel). The site is adjoined on the east by the Alameda County transportation corridor (formerly the Southern Pacific Railway). It is traversed by the Union Pacific Railway (UPRR), which parallels the transportation corridor, crossing the site in a southwest to northeast direction and dividing the Central Parcel from the East Parcel. A network of generally dirt roads serves the agricultural operation, one of which passes under I-680 to provide an onsite connection between the West and Central Parcels.

Four operating wells are located on the Central Parcel, served by electrical lines. (See Chapter 5, Part C for a discussion of water facilities).

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<sup>21</sup> Preliminary Site Analysis [City of San Francisco Property, Pleasanton, CA], Ted C. Fairfield, Consulting Civil Engineers, July 11, 1986.



### **c. Jobs/Housing Balance in Pleasanton**

In this era of multiple jobs per household, the balance between jobs and housing is most appropriately measured in terms of the balance between jobs and employed residents (resident workers). This approach allows a city to evaluate whether it is providing sufficient employment opportunities for the workers who live there, and sufficient housing opportunities for the people employed there. It provides an indication of the potential impacts of new development on regional commute flows, and, consequently, of potential impacts on traffic congestion and air quality.

In 1996, Pleasanton had an estimated 34,144 jobs and 34,403 employed residents. These figures translate into a ratio of 0.99 jobs per employed resident. They indicate that Pleasanton provided approximately the number of jobs as it had resident workers. In other words, if the employment opportunities and labor force skills were perfectly matched, Pleasanton would have provided enough jobs for all the workers who lived there, and enough workers for all the jobs located there.

The General Plan anticipates a buildout condition with 46,400 employed residents<sup>22</sup> and 68,254 jobs. Under this condition, the ratio of jobs to employed residents would be approximately 1.5, requiring a net incommute to Pleasanton.

## **3. Impacts**

### **a. Impacts of the Cooperative Plan and the Preferred Plan**

**(1) Compatibility with Adjacent Uses on Adjacent Sites.** There is a potential for adverse land use impacts relating to the juxtaposition of onsite uses with adjacent offsite uses which are sources of traffic and environmental noise, or which, due to the scale of offsite uses (such as the Alameda County Fairgrounds) or a sharp contrast in use (i.e., east and west of the Alameda County transportation corridor, where residential would face industrial across the corridor) would involve a sharp contrast to potential specific plan land uses.

The risk of such effects is minimized by the fact that, in general, the site is separated from surrounding uses by strong physical elements, either transportation facilities (Bernal Avenue, the Alameda County transportation corridor, and the UPRR tracks) or the Arroyo de la Laguna and its vegetated corridor. This separation provides a built-in buffer between disparate types of land use.

Adverse land use impacts can be prevented by avoiding sharp contrasts in land use type on proximate sites. The reason why sharp contrasts are typically avoided is that different uses have different kinds and magnitude of environmental impacts (such as traffic generation, noise and visual characteristics) which can be intrusive to, or disruptive of, the operations of adjacent uses. Examples that relate to the study area include the freeway and the railroad, the activities on the Alameda County Fairgrounds, and the adjacent industrial and business park areas.

Under either the Cooperative Plan or the Preferred Plan, development of the site would result in contrasting land use types on- and offsite (1) on the western boundary, where the site abuts the Arroyo de la Laguna;

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<sup>22</sup> Assuming 29,000 housing units and 1.6 employed residents per unit.

(2) on the northern boundary, where the site faces the Alameda County Fairgrounds across Bernal Avenue; and (3) on the eastern boundary, where industrial uses are located near the site along Sunol Boulevard.

**West** ■ Both plans provide predominantly open space and golf course lands between the Arroyo and residential development. Open space provides the greatest potential protection for the Arroyo. The golf course between the open space and the residential development (except for one area in the northern part of the West Parcel) in the Preferred Plan would provide a suitable transition between the open space and the residential area with its more intensive land use and activity levels. No land use conflict would occur.

**North** ■ The Cooperative Plan locates Village Commercial and Village Commercial/Office uses along most of the site frontage across from the County fairgrounds. These development types have their heaviest times of use during the day on weekdays, when the fairgrounds – even during the fair itself – is less heavily used, and is less affected than residential uses would be by heavy traffic, noise, and other impacts of activities at the fairgrounds. The remainder of the northern frontage is occupied by the community park, which accommodates activities that are not highly sensitive to fairgrounds activities. No land use conflict would occur.

In the Preferred Plan, the northern boundary of the site is occupied by Village Commercial/Office, the golf course, and the community park. This plan differs from the Cooperative Plan only in the substitution of the golf course for Village Commercial use. The compatibility with the fairgrounds is similar. No land use conflict would occur.

**East** ■ The Cooperative Plan would locate residential uses, an elementary school, and a fire station on the east side of the East Parcel, nearest to the existing industrial uses that are located along Sunol Boulevard. The residential uses would abut the project boundary on the north, nearer to Hüls America and Proficient Foods, while the elementary school would occupy the area to the south, nearer to Kaiser Aluminum.

The Preferred Plan places a fire station, elementary school, and neighborhood park between the residential uses and the project boundary. The fire station and school would be located to the north, nearer to Hüls America and Proficient Foods, while the park would occupy the area to the south, nearer to Kaiser Aluminum.

Existing environmental controls on operations of office and industrial uses would diminish the potential for industrial uses offsite east of the East Parcel to expose users of and/or visitors to the new onsite uses to adverse environmental conditions.

Perception of land use contrast would be mitigated due to distance and the separation of onsite from offsite uses by the transportation corridor. At the school site, a grade differential would also provide visual buffering. Additional buffering is desirable to avoid a perception on the part of future residents that their residential environment is adversely affected by the presence of ongoing industrial uses nearby.

Buffering of residential uses from adjoining transportation uses (I-680 and Bernal Avenue) is discussed in Chapter 5, Part L (Noise).

**Impact A1. Potential for conflict between offsite land uses and onsite land uses.**

Existing City of Pleasanton land use and development controls are intended to preclude adverse impacts resulting from adjacency of incompatible uses on and off the site. Nevertheless, the juxtaposition of industrial and residential uses creates a potential for adverse impacts of the former on the latter, even if such impacts do not exist at the present time.



**(2) Compatibility of Land Uses Onsite.** In both the Cooperative Plan and the Preferred Plan, the proposed mix of land uses conforms to the overall mix of uses proposed for the San Francisco specific plan area in the 1986 Pleasanton General Plan (and carried forward in the 1996 General Plan). From a conceptual perspective, land use compatibility is implicit in the mix. The Cooperative Plan and Preferred Plan are similar in many of the onsite land use relationships they propose:

- Residential development would be located around the golf course on the Central and West Parcels.
- The northeast corner of the Central Parcel is devoted to a community park: in the Cooperative Plan, this park is across the street from residential and Village Commercial/Office uses; in the Preferred Plan, it is across the street from the golf course.
- The East Parcel would be devoted substantially to residential use. An elementary school, park, and fire station share this parcel.
- In both cases, fixed transportation facilities (I-680, Bernal Avenue, the UPRR tracks, and the Alameda County transportation corridor) would remain in place. The transportation use(s) of the transportation corridor has not yet been determined, but rail use (commuter and/or historic excursion trains as discussed in Chapter 5, Part J (Transportation and Circulation)) is expected, as well as a Class A regional trail (described in Chapter 5, Part H (Public Services: Recreation and Parks)).
- In both cases, a golf course would be a substantial element of the site plan. Under both the Cooperative and the Preferred Plan, the golf course would completely encircle the largest of the West Parcel residential areas and, on both West and Central Parcels, would provide some separation between I-680 and portions of the residential development, serving as a noise buffer as well as (potentially) a visually appealing element seen from the freeway.

Under the Cooperative Plan, the West Parcel would not include commercial use, so there would be no potential residential/non-residential land use conflict. Under the Preferred Plan, side-by-side siting of residential and commercial uses would occur on West Parcel as well as on the Central Parcel. Consistent with neo-traditional planning principles, under the mixed-use development concept commercial use areas do adjoin residential areas without giving rise to land use conflict; the use of a specific plan process affords the opportunity for systematic minimization of potential design, access, noise, and other impacts that might otherwise have resulted in land use conflicts.

The golf course introduces potential safety issues into both the Cooperative Plan and the Preferred Plan. Stray golf shots can injure those outside the golf course when fairways adjoin other land uses. In both plans, the golf course occupies sufficient land area to allow for a design with satisfactory fairway widths to minimize safety hazards. Under the Cooperative Plan, residential uses line most of the fairways, allocating the risks to those who choose to buy homes adjacent to the open space/golf course amenity. In the Preferred Plan, public streets parallel fairways in many locations, putting the general public at risk of being hit by wayward shots.

<b>Impact A2.</b>	<b>Potential for safety hazards for residences and passing cars, pedestrians, and bicyclists from stray golf shots.</b>
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	The juxtaposition residences and streets along the golf course may introduce a safety issue to users of the lands along the golf course.
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**(3) Conversion of Agricultural Land to Urban Use.** Development according to either the Cooperative Plan or the Preferred Plan would result in the loss of the site's agricultural use.

The project area contains Class I and Class II soils as defined by the Soil Conservation Service (SCS) of the U.S. Department of Agriculture (USDA). (See Figure 11.) Class I soils have few limitations that restrict their use and are excellent or well-suited to general intensive agriculture. Class II soils have some limitations that reduce the choice of plants, but are good and well-suited to agriculture. Class I and II soils are considered prime agricultural soils according to the SCS. The County EIR estimates that prime agricultural lands on the SFWD site include 500 acres (all of the site land except the knoll and the Arroyo).

The California Department of Conservation (CDC) also classifies agricultural lands. CDC's most recent Alameda County map designates most of the project area as prime.<sup>23</sup>

Portions of the SFWD site are suitable for irrigated or non-irrigated range and/or production of alfalfa hay. In Alameda County as a whole, the 1993 acreage in those types of agricultural uses were 140 acres, 207,450 acres, and 1,650 acres respectively (Alameda County Agricultural Commission, personal communication to Mundie & Associates, February 8, 1995). There are no existing Williamson Act contracts on any land in the project area and have never been such contracts in the past. The most recent agricultural use reported for the site is dryland grain farming.

In considering the impact of conversion of this land, it is important to recognize that the site is completely surrounded by developed uses, including major transportation uses that create barriers to integration of this land with other agricultural operations offsite, and that there is only one onsite road connection between the West and Central Parcels due to the barrier created by I-680.

The conversion of this land from agriculture to urban has been anticipated in Pleasanton's planning process for many years (in the 1965 General Plan, for example, it was proposed for industrial development).

The County's EIR, prepared in 1995 for the project that was proposed at that time, included a detailed analysis of the project's consistency with the East County Area Plan (ECAP). That analysis determined that, although development of the site would result in a significant and unavoidable adverse impact by converting prime agricultural land to urban use, it was nevertheless consistent with the ECAP. In support of this determination, the County EIR noted that:

- the project area is surrounded by urbanized land uses;
- there are no continuing agricultural operations that development of the project area would affect;
- the project area is within the County's Urban Growth Boundary;
- conversion of the project area would be a part of phased growth planned to avoid discontinuous development; and
- all necessary access roads, public utilities, and services would be available to the project site.

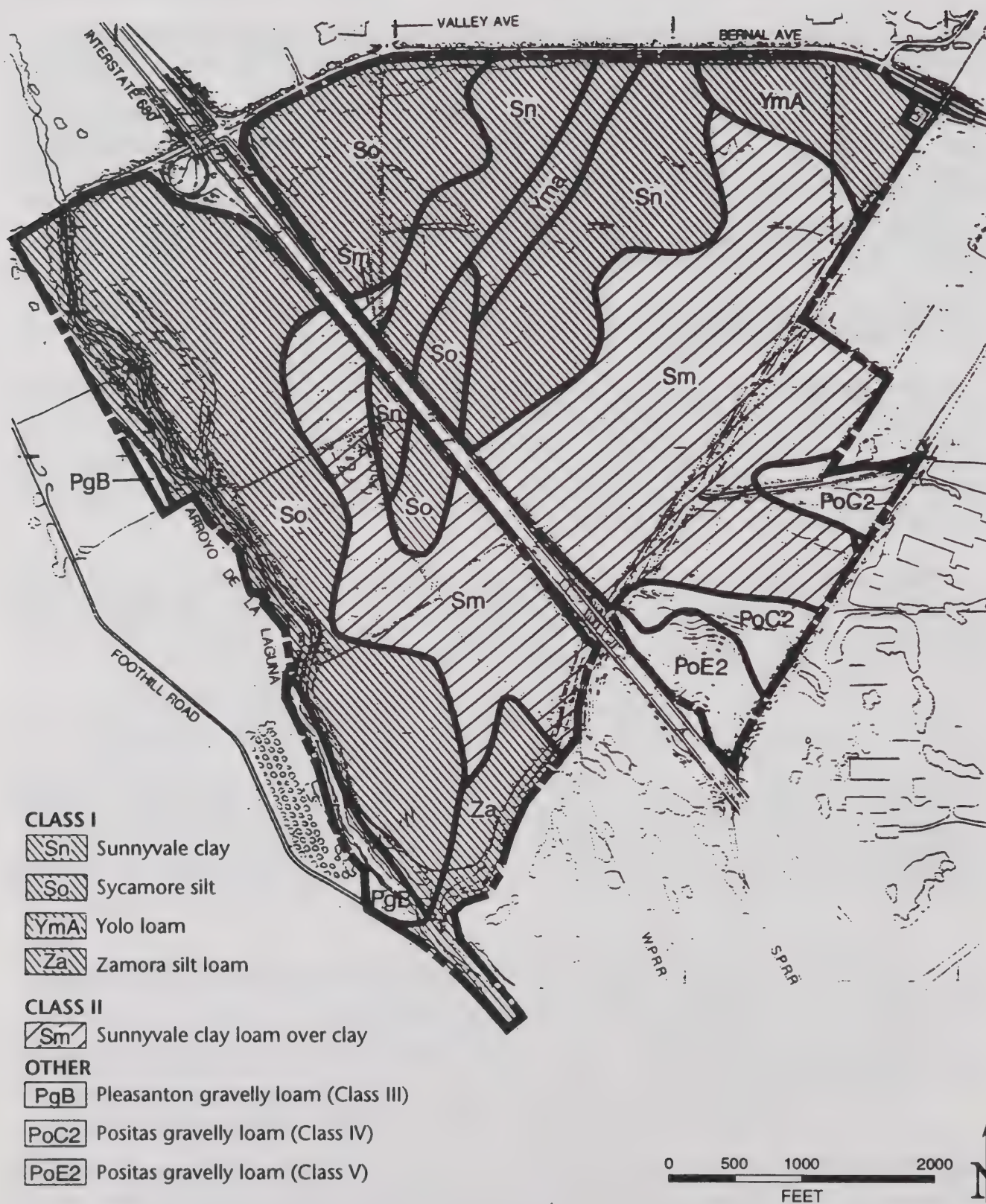
Given these conditions, the conversion of the prime soils within the project area for urban uses would be consistent with the ECAP policy that recognizes that "in spite of this area's prime soil designation, its value for agriculture may be limited by its proximity to the non-agricultural uses that surround it."<sup>24</sup>

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<sup>23</sup> Farmland Conversion Report, California Dept. of Conservation, Office of Land Conservation, 1990-92, p. 4.

<sup>24</sup> ECAP Draft EIR, Alameda County, June 1993, p. 5.2-13.





Source: Alameda County Bernal Property Specific Plan EIR, Figure 4.12-3,  
based on Merrill, Seeley, Sandefur, Inc., 1986

Figure 11  
**Soils**

Nevertheless, because SCS criteria for designation as prime farmland are met, development would constitute an adverse impact, both for the project and cumulatively. This conclusion is consistent with the impact finding in the EIR on Pleasanton's 1996 General Plan.

**Impact A3. Conversion of agricultural land to non-agricultural uses (project impact and cumulative impact).**

**(4) *Jobs/Housing Balance.*** It is not expected that all residents of development on the Bernal property would work at jobs located on the site, or that all workers employed on the site would seek to live there. However, as noted above, it is useful to estimate a project's jobs/housing balance, since it provides an indirect measure of potential commute flows and impacts on the regional transportation system.

Both the Cooperative Plan and the Preferred Plan would accommodate 1,900 housing units. Pleasanton currently has about 2.85 persons per household, so the population accommodated by 1,900 housing units would be up to 5,415. At 1.6 employed persons per household, employed residents in the project would number 3,040.<sup>25</sup>

The Cooperative Plan and the Preferred Plan would accommodate approximately 200,000 square feet of retail building space and 357,000 square feet of commercial/office space (see Table 2, p. 8). The number of jobs in this space can be estimated based on employment density factors; that is, the average amount of building space per worker in various types of space. The Pleasanton General Plan assumes employment density ratios of one worker per 510 square feet of retail space and one worker per 260 square feet of office space. Based on these factors, both plans would accommodate approximately 1,765 workers in office and retail buildings. As many as 100 jobs would be associated with the golf course; additional jobs would be located at the elementary school and the fire station. For purposes of this analysis, the number of jobs associated with the Cooperative and Preferred Plans, including all of these uses, is estimated at 1,910.

With 1,910 jobs and 3,040 employed residents, the project would have a ratio of jobs to resident workers of 0.63. Viewed from a different perspective, the housing provided on the project site would accommodate about 60 percent more workers than the number of jobs located in the commercial, office, and other non-residential development. These calculations are summarized in Table 6. This relationship will help bring the City's projected ratio of jobs to resident workers closer to 1:1 than its projected General Plan buildout ratio of 1.5. No adverse impact would occur.

**(5) *Affordable Housing Opportunities.*** The Cooperative Plan Agreement (p. 6) includes a provision for affordable housing as follows:

A rental and ownership inclusionary affordable housing program will be incorporated into the plan to provide a total of approximately 10% affordable housing on-site through utilization of Project generated fees. Twenty five percent (25%) of rental units will be affordable to households earning 60% of the median income. Remaining affordable housing will be "for sale" single-family products affordable to moderate income households (earning approximately 100 percent of the median income).

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<sup>25</sup> *Projections 96*, Association of Bay Area Governments is the source for population, household, and employment figures; City of Pleasanton staff is the source for the estimate of 1.6 employed residents per household.



**Table 6**  
**Jobs/Housing Balance: Cooperative Plan and Preferred Plan**

	<b>Cooperative Plan</b>	<b>Preferred Plan (Alternative 1)</b>
Building space, retail	200,000	200,000
commercial/office	357,000	357,000
Employment, retail	392	392
commercial/office	1,373	1,373
other <sup>a</sup>	145	145
<b>Total employment</b>	<b>1,910</b>	<b>1,910</b>
<b>Total employed residents<sup>b</sup></b>	<b>3,040</b>	<b>3,040</b>
<b>Jobs per employed resident<sup>b</sup></b>	<b>0.63</b>	<b>0.63</b>
<b>Employed residents per job</b>	<b>1.59</b>	<b>1.59</b>

<sup>a</sup> Includes 100 golf course employees plus allowance for employment at the elementary school and fire station.

<sup>b</sup> Assumes 1.6 employed residents per household.

Source: Mundie & Associates

With 1,900 residential units proposed, this provision would create approximately 190 units of affordable housing on the site. The tenure of the housing stock and the income levels of households inhabiting it are not environmental impacts under CEQA.

## **b. Impacts of Alternative 2**

**(1) Compatibility with Adjacent Uses on Adjacent Sites.** Along the western boundary of the site, Alternative 2 does not differ from the Cooperative Plan and the Preferred Plan. No land use conflict at the site's would result.

Along the eastern boundary, Alternative 2 has residential use where the Cooperative Plan and Preferred Plan both have residential use, a school, park land, and a fire station. Potential for land use conflict results from the proximity of residential development to sources of noise (e.g., the railroad corridor) and industrial uses. Perception of land use contrast would be mitigated due to distance and the separation of onsite from offsite uses by the transportation corridor; additional buffering is desirable to avoid a perception by future residents that their residential environment is adversely affected by the presence of ongoing industrial uses nearby.

Along the northern boundary of the site, Bernal Avenue separates project lands from those adjacent. Under Alternative 2, most of the land use types fronting Bernal Avenue between I-680 and the UPRR tracks are non-residential uses that would face employment and fairgrounds uses across Bernal Avenue, and no land use conflict would be involved. The two narrow areas of Village Residential use along Bernal Avenue under Alternative 2 might require special measures to avoid adverse noise (or other) impacts from the fairgrounds and the road, but land use conflict would not be an issue.

<p><b>Impact A1. Potential for conflict between offsite land uses and onsite land uses.</b> Same as for the Cooperative Plan and the Preferred Plan.</p>
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**(2) Compatibility of Land Uses Onsite.** The arrangement of land uses onsite follows the same general principles as the arrangements in the Cooperative Plan and the Preferred Plan: dissimilar uses are typically (although not always) separated from each other by a roadway. Of the four site plans reviewed in this EIR, Alternative 2 is the most marked example of an arrangement in which residential and commercial uses are physically and visually accessible to each other, reflecting a typical "neo-traditional" style. This arrangement does not constitute an adverse land use impact: specific plan siting and design standards monitored through the site plan and design review process would assure accomplish compatibility where dissimilar uses adjoin.

Because Alternative 2 does not include a golf course, there is no potential for safety hazards from stray golf shots.

**(3) Conversion of Prime Agricultural Land to Urban Use.** As found in the analysis of the Cooperative and Preferred Plans, development under Alternative 2 would result in the conversion of prime agricultural land to urban use, an adverse land use impact.

**Impact A3. Conversion of agricultural land to non-agricultural uses (project impact and cumulative impact).**

Same as for the Cooperative Plan and the Preferred Plan.

**(4) Jobs/Housing Balance.** The development program of Alternatives 2 is the same as for the Cooperative and Preferred Plans except that, in the absence of a golf course, its employment level would probably be slightly lower, and its jobs/housing balance would be slightly lower as well. The jobs/housing balance for this alternative is calculated in Table 7.

Table 7  
Jobs/Housing Balance: Alternatives 2 and 3

	Alternative 2 No Golf Course	Alternative 3 County Spec. Plan
Building space, retail	200,000	<i>See County EIR (pp. 4.1-4 and 4.1-13)</i>
office	357,000	
Employment, retail	392	
office	1,373	
other <sup>a</sup>	50	
Total employment	1,815	
Housing, units	1,900	
residents (@2.85)	5,415	
employed residents (@1.60)	3,040	
Jobs per resident worker <sup>b</sup>	0.60	

<sup>a</sup> Includes allowance for employment at the elementary school and fire station plus 5 employees assumed for open space maintenance under Alternative 2.

<sup>b</sup> A lower ratio means that there would be more residents per job; i.e., Pleasanton would be increasing its housing supply as compared with its employment base.

Source: Mundie & Associates



**(5) Affordable Housing Opportunities.** Alternative 2 could be made subject to the affordable housing provision of the Cooperative Plan Agreement, therefore creating the same housing opportunities as the Cooperative Plan and Preferred Plan.

### **c. Impacts of Alternative 3**

Alternative 3 would permit the same amount of commercial and office development as the Cooperative and Preferred Plans, except that the housing count could be as high as 2,500 units. The number of jobs per housing unit would therefore be lower than in the other alternatives. Impacts of Alternative 3 are discussed in the County EIR, Chapter 4.1.

## **4. Mitigation Measures**

Impact A1. Potential for conflict between offsite land uses and onsite land uses.

**Measure A1a. Apply appropriate City land use regulations and development controls to minimize potential conflicts.**

Examples of such regulations and controls include:

<u>Adjacent Land Uses</u>	<u>Regulations/Controls</u>
Residential and golf course	Disclosure to prospective residents; Golf course design (including location of clubhouse) to minimize potential conflicts.
Residential and trail	Disclosure to prospective residents; Design of trail and residences to minimize potential conflicts.
Residential and commercial	Design of commercial use(s) to minimize loading, dumpsters, and other potentially noisy or odorous uses adjacent to residential development; Enforcement of code restrictions on use of leaf blowers; Regulation of times for parking lot sweeping; Location of 24-hour operations away from residential uses; Enforcement of the noise ordinance to ensure that commercial uses meet City noise standards at site boundaries; Requirement to obtain a Conditional Use Permit for potential nuisance-causing uses; Enforcement the existing Zoning Code to ensure that glare from the commercial uses does not adversely affect residential uses
Park and residential	Disclosure to prospective residents; Design of residences to minimize potential conflicts; Design of park (e.g., parking area and lights) to minimize potential conflicts.

Residential and school	Disclosure to prospective residents; Design of residences to minimize potential conflicts; Design of school (e.g., access and parking area) to minimize potential conflicts.
<b>Measure A1b.</b>	<b>Require that developers of residential property east of Case Avenue or its southerly extension include disclosure of nearby uses in their sales and contract materials.</b>
<b>Measure A1c.</b>	<b>Along the eastern perimeter of the project site south of Junipero Avenue, incorporate into the plan measures to accomplish visual separation between uses on the East Parcel and uses beyond, including uses in the Alameda County transportation corridor site and industrial uses farther east.</b>  Such measures should include a grade differential between the school site and lands to the east and landscaped screening along the transportation corridor.

Implementation of Measures A1a through A1c would reduce Impact A1 to a less-than-significant level.

**Impact A2.** Potential for safety hazards for residences and passing cars, pedestrians, and bicyclists from stray golf shots.

<b>Measure A2a.</b>	<b>Require that purchasers of homes on the golf course be notified prior to purchase of potential hazards to people and property that may result from stray golf shots.</b>
<b>Measure A2b.</b>	<b>Minimize the potential for stray shots to hit residences, passing cars, and/or pedestrians by:</b>  <ol style="list-style-type: none"> <li>(1) Designing the course with appropriate fairway widths and landscaping/fencing to minimize the potential for golf balls to land on residences or within yards, <i>or</i>.</li> <li>(2) Requiring adequate fairway widths at landing zones (minimum 200 feet) bordering streets and trails, and requiring landscaping/fencing between roadways/trails and fairways to retain errant bouncing balls, <i>or</i></li> <li>(3) Revising the Preferred Plan to provide for buildings along fairways at critical landing zones.</li> </ol>

Implementation of Measures A2a and A2b would reduce Impact A2 to a less-than-significant level.

**Impact A3.** Conversion of prime agricultural land to non-agricultural uses.

<b>Measure A3.</b>	<b>None.</b>  This impact cannot be mitigated if development of the project occurs.
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If development occurs, Impact A3 would be significant and unavoidable.



## **5. Summary Comparison of Impacts and Mitigated Impacts: Land Use**

	<b>Cooperative Plan</b>	<b>Preferred Plan (Alternative 1)</b>
<b>Impact A1.</b> <b>Potential for conflict between offsite land uses and onsite land uses.</b>	S/LS	S/LS
<b>Impact A2.</b> <b>Potential for safety hazards for residences, passing cars, pedestrians, and bicyclists from stray golf shots.</b>	S/LS	S/LS
<b>Impact A3.</b> <b>Conversion of prime agricultural land to non-agricultural uses.</b>	S (C)/S (NM)	S (C)/S (NM)

Key: \*/\*: significance before mitigation/significance after mitigation.

S: significant

(C): contributes to cumulative impact

LS: less than significant

n.a.: impact does not apply to this alternative

\* no mitigation required

ND: not determinable

†

Less than significant before mitigation, but contributes to cumulatively significant impact.

NM: no mitigation possible (beyond policies, programs, and other regulations already in place).

## B. INFRASTRUCTURE SYSTEMS: DRAINAGE

### 1. Characteristics of the Project

The project would develop urban uses on a site that for the most part is open land. The site plan and features of the project have been designed to accommodate runoff that would be associated with substituting buildings and paved parking areas for the permeable surfaces that now exist. These features include the following:

- A site plan that provides extensive permeable surfaces in the form of a golf course, public parks, and open space;
- Management of storm drainage through provision of onsite storm water retention facilities incorporated into the landscape amenities and features of the golf course water; and
- Design of retention facilities to be capable of retaining the increase in runoff from the site under developed conditions for the 100-year storm event.

The additional runoff into the Arroyo de la Laguna created by site development under the 100-year storm condition has been calculated for the Preferred Plan.<sup>26</sup> The results of this analysis are shown in Table 8.

**Table 8**  
**Runoff from the Site under the 100-Year Storm: Existing and Preferred Plan Project**  
**(cubic feet per second/cfs)**

	West Parcel	Central Parcel	East Parcel	Total
Existing Condition	48	75	36	159
Post-development	65	123	53	241
Total Increase	17	48	17	82

Source: Lamphier & Associates, April 1997

As shown in Table 8, potential runoff from the site under Preferred Plan development would increase by approximately 82 cfs, which is less than 0.5 percent of the FEMA 100-year storm event flow of 17,000 cfs. (Under the Cooperative Plan, runoff amounts would be expected to be equivalent, given the similarity in land uses and development intensities.) This estimate of runoff was utilized to determine the capacity requirement of planned onsite detention/retention facilities. A facility (or facilities) with capacity for approximately 24 acre-feet would be provided to retain the increased runoff due to development of the site.<sup>27</sup> As a result, the project would not result in any net increase in runoff under the 100-year storm event.

<sup>26</sup> Lamphier & Associates, April 1, 1997. This analysis used the computer program HYDROCAD and the TR-20 method developed by the U.S. Soil Conservation Service (SCS) for use in urbanized watersheds. Rainfall intensity curves were based on historical data for the watershed (National Oceanic and Atmospheric Administration), and runoff coefficients were selected from SCS tables for various land use types.

<sup>27</sup> Scott Gregory, Lamphier & Associates, communication to Mundie & Associates, April 9, 1997.



The drainage concept of the specific plan would leave certain side channels as is and culvert or relocate others, as described in Table 9. Culverts that would be relocated and side channels that would be relocated or culverted to implement the project would be sized in accordance with City policy for local drainageways.

**Table 9**  
**Proposed Changes in Drainage Facilities**

<b>Drainage Facility</b>	<b>Change</b>	<b>Alternative</b>
Ditch carrying flows from fairgrounds area eastward along Bernal Avenue and southward to Line B-2-2	culvert	both Cooperative and Preferred Plans
Ditch parallel to Junipero Street carrying flows to Line B-2-2	culvert	Same
Ditch carrying flows from east of project site toward Junipero Street ditch	culvert	Same
Ditch parallel to UPRR tracks north of Junipero Street	potentially culvert	Preferred Plan
Ditch parallel to UPRR tracks south of Junipero Street	either culvert or relocate	Preferred Plan
Ditch at foot of the knoll (E in Figure 40)	culvert	both Cooperative and Preferred Plans

Source: City of Pleasanton

Changes in existing drainage facilities listed in Table 9 were identified and mapped (Figure 8D, p. 38) in Chapter 4 under Option 4. Some proposed changes would be implemented under both the Cooperative and the Preferred Plans; others apply only to the Preferred Plan.

Enlargement, culverting, and/or relocation of existing open drainage could potentially affect biological resources. This issue is addressed in Chapter 5, Part O (Biology).

The project (under the Cooperative Plan or the Preferred Plan) would make provision for the regional flood control strategy described in Chapter 4, Option 5d (illustrated in Figure 8H, p. 42). The setback provided under this option would accommodate a range of potential future flood control improvements by providing sufficient setback from the Arroyo to allow future right-of-way and improvement options.

## **2. Setting**

### **a. Regional Setting**

**1. Drainage Area.** The project site drains into the Arroyo de la Laguna, which forms the western boundary of the SFWD West Parcel. The Arroyo drains a watershed that encompasses almost 400 square miles, extending to Pleasanton Ridge to the west, Mt. Diablo to the north, the Altamont Pass area to the east, and the northeastern flanks of Mt. Hamilton to the south. It includes the combined watersheds of the Arroyo del Valle (which flows from the Del Valle reservoir), Arroyo Mocho, Alamo Canal, Arroyo las Positas, Tassajara Creek, Chabot Canal, and Gold Creek.

Zone 7 of the Alameda County Flood Control and Water Conservation District is the local agency charged with surface water management and flood control. The Arroyo de la Laguna is Zone 7's "Line B."

According to Zone 7, the Arroyo de la Laguna north of the Bernal Avenue bridge has been improved as an open channel with capacity to accommodate the 100-year flood flow of 17,000 cubic feet per second (cfs). The specific plan for the Laguna Oaks project north of Bernal Avenue and the West Parcel reports that the 100-year flood zone in that area is below a water surface elevation (WSEL) of 318 feet.

The Arroyo south of the specific plan area flows south to an impoundment above a dam along Niles Canyon Road west of the community of Sunol. Outflow from the impoundment enters Alameda Creek, which flows westward into Fremont, eventually emptying into San Francisco Bay.

**2. Past Flood Events.** Since the construction of the Del Valle Reservoir in 1968, the peak discharge recorded from the project area (at a downstream gauging station 2.25 miles to the south) was 11,400 cfs in January 1982.

A major storm in February 1986, sometimes referred to locally as “the Valentine’s Day Storm,” has been reported as the most severe storm observed since Del Valle Reservoir was constructed. It is estimated that this storm was between a 25- and a 40-year return period storm<sup>28</sup>. Records available from the Water Resource Division of the U.S. Geological Survey indicate that the peak flow in Alameda Creek near Niles (in the City of Fremont, approximately ten miles downstream of the project area) occurred on February 19, 1986, and was 16,400 cfs. The 25-year storm peak is estimated to be approximately 12,000 to 13,000 cfs within the Arroyo channel portion of the project area under existing conditions.

No floods have been recorded which have exceeded the 100-year flood, estimated by FEMA (the Federal Emergency Management Agency) at 17,000 cfs.

#### **b. Local Setting**

The reach of the Arroyo along the project site is a natural water course with significant riparian habitat. Within the specific plan area, the Arroyo channel bottom is typically 30 to 50 feet wide, with a depth of approximately 25 to 30 feet, and a bank-to-bank dimension of more than 100 feet.

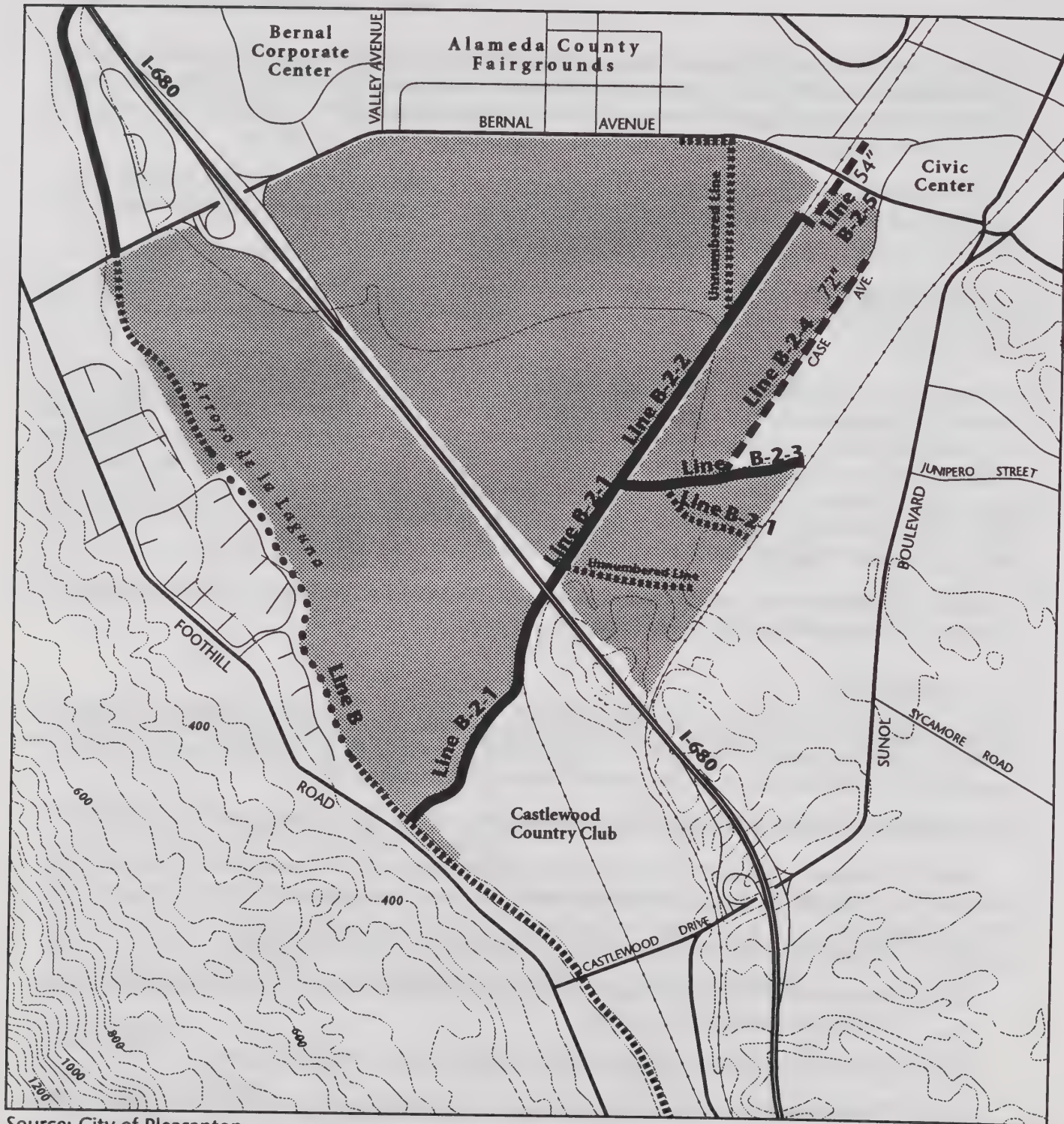
The project site is drained by a series of drainages that flow into the Arroyo (see Figure 12 and Table 10):

- B-2-1: The primary tributary channel flows on the east side of the Central Parcel, parallel to the UPRR railroad tracks. It empties into the Arroyo at the southern tip of the West Parcel.
- B-2-2: This channel is the upstream reach of B-2-1, also paralleling the UPRR tracks.
- B-2-3: This channel begins east of the study area, entering the Eastern Parcel along Junipero to merge with B-2-1 near the UPRR tracks.
- B-2-4: This line is an improved storm drain that empties into B-2-3 at Case Avenue.
- B-2-5: The portion of this channel on the site is the upstream reach of B-2-2, also paralleling the UPRR tracks.
- Other: Several smaller (unnumbered) drainage lines also drain the site and offsite areas, including the fairgrounds and areas east of Sunol Blvd.

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<sup>28</sup> Joe Elliott, Former Pleasanton Public Works Director, personal communication to The Planning Collaborative, 1992.





Source: City of Pleasanton

- Unimproved Channel
- West side stabilized (adjacent to Golden Eagle Farms subdivision)
- Improved Channel
- Culvert

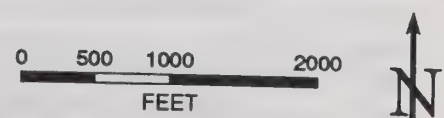


Figure 12  
Drainage Features (Existing)

**Table 10**  
**Status of Project Area Drainage Lines**

<b>Channel<sup>a</sup></b> (listed south to north)	<b>Status and Type<sup>b</sup></b>	<b>R.O.W. Ownership</b>	<b>Eligibility for SDA 7-1 Reimbursement Funds<sup>c</sup></b>	<b>Improvement Responsibility</b>
Line B S. of Bernal Ave. bridge to Line B-2-1	unimproved natural earth channel; portion of west bank stabilized	City of San Francisco and Zone 7	Eligible	[See Ch. 4, Option 5]
Line B N. of Bernal Ave. bridge	improved open earth channel; riparian habitat retained on one side	Zone 7	same	[constructed]
Line B-2-1 Line B to Line B-2-3	improved open earth channel	Zone 7 (easement)	Non-SDA area, not eligible	landowner
Line B-2-2 from Line B-2-3 to Line B-2-5	improved open earth channel	Zone 7 (easement)	same	landowner
Unnumbered Line from Line B-2-2 to Bernal Ave.	unimproved open earth channel	City of San Francisco	same	landowner
Line B-2-3 through trans. corridor	pipe	Alameda County	same	[constructed]
Line B-2-3 from trans. corridor to Line B-2-1	improved open earth channel	Zone 7 (easement)	same	landowner
Line B-2-4	72" storm drain	City of Pleasanton	same	[constructed]
Line B-2-5	54" storm drain	City of Pleasanton	same	[constructed]

<sup>a</sup> Zone 7, Flood Control Base Map Authorized Project Lines, 1988; only channels south of the Bernal Ave. bridge to the confluence of channel B and B-2-1 are within the Special Drainage Area (SDA) 7-1 project area.

<sup>b</sup> If landowner reconstructs channel as an underground box culvert, Zone 7 policies dictate that landowner shall purchase R.O.W. and assume maintenance of culvert.

<sup>c</sup> SDA 7-1, Zone 7 Ordinance 53, program established 1966; other channels are not eligible for reimbursement.

Source: County EIR, Table 4.4-1 (p. 4.4-10), updated by Mundie & Associates based on information supplied by Zone 7 and City of Pleasanton

### **c. Flood Control**

**(1) Storm Flow Estimates for the Arroyo de la Laguna.** The current adopted FEMA 100-year storm flow at the project site is 17,000 cfs. Other studies have estimated the existing 100-year storm flows to range from 19,800 to 23,000 cfs and future storm flows at buildout of the Tri-Valley area to be as much as 27,000 cfs. These studies are summarized as follows:

17,000 cfs The FEMA Flood Insurance Study, 1984<sup>29</sup> indicates that the 100-year flood in the Arroyo in the reach below the Bernal Avenue bridge is 17,000 cfs for existing conditions.

23,000 cfs Consultants to the Army Corps of Engineers (COE) prepared a study in 1982<sup>30</sup> that estimated the potential 100-year flow under then-current conditions to be 23,000 cfs.

<sup>29</sup> Flood Insurance Study of the City of Pleasanton - Flood Insurance Rate Map (revised), Federal Emergency Management Agency, September 19, 1984



- 27,000 cfs The same COE analysis estimated the future 100-year flow resulting from buildout of the upstream area (an increase in urbanization of approximately 25 percent), with no provisions for upstream retention and/or detention, at 27,000 cfs.
- 19,800 cfs The estimate of a 100-year flood design peak of 19,800 cfs immediately below the Bernal bridge is the most recent (July 1994)<sup>31</sup> revision by Zone 7 of its 100-year flood estimates for the downstream reaches of the Arroyo de la Laguna. Currently Zone 7 is in the process of re-evaluating and revising its past estimates. The analysis uses 19 years of gauge records since the completion of the Del Valle reservoir without adjustment for the limited number of years of record. (Flow records prior to the completion of Del Valle are not used since the dam dramatically reduced the peak flow downstream.)
- 18,500 cfs For the Cooperative Plan, a study was undertaken with the purpose of determining what capacity can be accommodated within the Arroyo while minimizing adverse impacts on the riparian corridor, a narrower objective than those addressed by the public agency efforts described above. The Cooperative Plan analysis estimates 18,500 cfs as the maximum flow that can be accommodated in the reach of the Arroyo below the Bernal Avenue bridge given (1) the height of the existing Bernal bridge, (2) COE standards for existing bridges, (3) COE requirements for new bridges, (4) pad elevations of closest residences upstream of the bridge, and (5) other physical conditions upstream. This analysis is described in Subpart (4), below.

**(2) Area Subject to Flooding.** In 1984, the Federal Emergency Management Agency (FEMA) mapped flood hazard areas on the site for both the 100-year storm (the flood level that has a one percent chance of occurring in a given year) and the 500-year storm (the flood level that has a 0.02 percent chance of occurring in a given year). Both flood area maps assumed existing land use and flood control improvements (i.e., no further upstream development or flood mitigation improvements).

Figure 13 shows the areas subject to flooding from the 100-year storm (17,000 cfs at the project site, shown as Zone A) and the 500-year storm (28,000 cfs at the project site, shown as Zone B), according to the FEMA flood insurance maps for the project vicinity:

- Zone A This area, which is subject to flooding in the 100-year storm, is generally contained within the banks of the Arroyo and within the banks of the B-2-1 line on the SFWD property. Zone A does, however, extend beyond the banks of the Arroyo to channel B-2-1 near the confluence of these drainage courses at the southern boundary of the property.
- Zone B This area, which is subject to flooding by storms in excess of the 100-year storm and up to the 500-year storm, covers the majority of the project site.

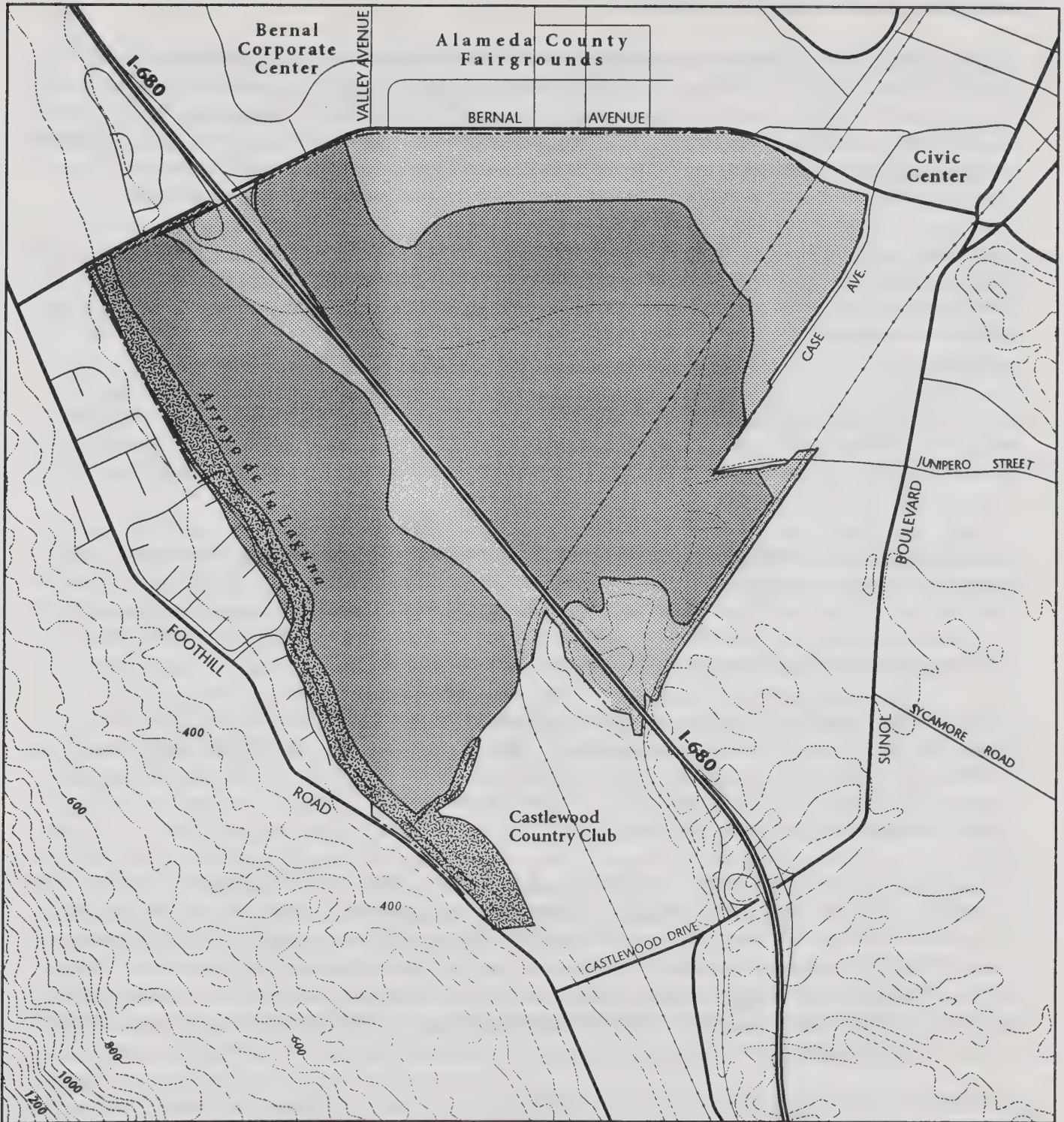
A very small portion of the project site – in the southwest corner of the West Parcel – is subject to out-of-bank flooding; the vast majority of the site is not within the 100-year flood plain mapped by FEMA.

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<sup>30</sup> *Upper Alameda Creek Hydrology Study*, report prepared for the San Francisco Corps of Engineers by Gill & Pulver Engineers, August 1982.

<sup>31</sup> *Flood Frequency Analysis Program Update*, Zone 7, July 21, 1994, and August 1994.





Source: Alameda County Bernal Property Specific Plan EIR, Fig. 4.4-1  
based on FEMA Flood Insurance Maps, Pleasanton, CA,  
060012 000 D, 9/19/84; Unincorp. Alameda Co., 060001 0205 B, 2/19/86

-  100 Year Flood Boundary
-  500 Year Flood Boundary
-  Areas of Minimal Flooding

Note: Flood zones shown only within study area except that along the Arroyo, the full 100-year flood zone is shown, even where a portion lies outside the project site.

0 500 1000 2000  
FEET



Figure 13  
**Flood Zone Map**



While limits of flooding onsite have not been determined for 100-year flood flows different from the FEMA 17,000 cfs flow, the FEMA 500-year flood plain estimate shown in Figure 13 is indicative of areas potentially subject to flooding from flood events at the upper end of the flow estimate range, since the 27,000 cfs flow is close to the FEMA 28,000 cfs flow mapped as the 500-year flood. Since the existing channel capacity is roughly equivalent to a 17,000 cfs flow, flows exceeding this level would flow eastward out-of-bank across the site since it is both very flat and lower than the lands along the west channel bank.

Pleasanton participates in the federal FEMA program. The City of Pleasanton General Plan prohibits development within the 100-year flood zone “unless mitigation measures which meet Federal Insurance Administration criteria are provided” (Policy 15, p. V-19). Adequate floodproofing of new structures and additions to residences “is normally accomplished by raising the building to an elevation above the 100-year flood level.”<sup>32</sup>

The FEMA flood hazard map presented in Figure 13 is based on existing conditions. As upstream development occurs, urban runoff will increase. If no measures are taken to increase the capacity of the Arroyo or to limit increases in flows, it is possible that a greater portion of the specific plan site will be subject to flooding under either flood event.

**(3) Zone 7 Flood Control Planning.** While the COE recognizes the possibility of future flooding along the Arroyo de la Laguna near the project site, as well as elsewhere in the Tri-Valley area, a COE analysis (Upper Alameda Creek Urban Study) determined that the benefit/cost ratios for the available solutions were not sufficient to warrant expenditure of federal funds. Therefore, the Corps concluded that the responsibility for flood control improvements lies with local agencies and/or developers who wish to build on the site.

In 1966, Zone 7 adopted a program to construct major flood control facilities throughout the district, including improvements to Arroyo de la Laguna through the project site. The program generally consists of widening natural channels to accommodate projected storm runoff in a series of open earth channels (see County EIR Figure 4.4-2, DEIR p. 4.4-4). To date, approximately 35 miles of a total of 85 miles of planned improvements have been completed.

The original estimated capital cost of the program, \$20.8 million, was to be paid through a combination of federal and state flood control programs, *ad valorem* taxes, and drainage fees (expected to produce slightly under one-half of the total estimated cost of the project). Special Drainage Area 7-1 (SDA 7-1) was created within which a drainage fee to help finance flood control improvements is levied on all new development. Current Zone 7 estimates indicate that completion of all planned flood control channels will cost approximately \$100 million.<sup>33</sup> The program does not include provisions for the construction of detention or retention basins upstream.

The drainage fees collected in SDA 7-1 can be used by Zone 7 for land acquisition, construction, engineering, repair, maintenance, and operation, or reimbursement for the same to developers who construct a portion of the improvements or who furnish any right-of-way for the SDA 7-1 project. The program does not require landowners or developers along the SDA 7-1 route to initiate or effect any improvements.

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<sup>32</sup> General Plan, p. V-10.

<sup>33</sup> ECAP EIR, p. 5-15-2.

The current drainage fee schedule<sup>34</sup> for the improvement district is as follows:

single family residence:	\$640
multi-family dwelling unit:	\$430
all other improvements:	13.4¢ per sq. ft. of impervious surfaces

The fee is to be paid at the time of issuance of a building permit. Fees collected are deposited in the Special Drainage Facilities Fund No. 7-1, funds from which may be used to reimburse any developer who constructs any portion of the SDA 7-1 project in accordance with the ACFC&WCD *Hydrology and Hydraulic Manual* and dedicates the necessary right-of-way.

To be eligible for reimbursement for the installation, construction, or dedication of rights-of-way, the plans and specifications must be approved by the general manager of Zone 7 and a contract must be executed between the Zone 7 Board and the developer. Any developer who has constructed portions of the SDA 7-1 project or has furnished right-of-way, and who is entitled to reimbursement under the provisions of the ordinance, may be exempted from payment of fees up to the amount of the reimbursement if it has not been paid.

Within the project area, only Line B (the Arroyo from south of the Bernal Avenue bridge to Castlewood Drive) is included in the list of facilities to be paid for by SDA 7-1. The reimbursement amounts are based on full improvements and right-of-way dedication which are pro-rated based on percent of ownership of Arroyo and amount of right-of-way to be granted to Zone 7.

Onsite drainage channels other than Line B may need improvement to accommodate development, depending on facility capacity, changes in onsite drainage patterns, and changes in offsite storm flows. In comments on the EIR for the County's adopted specific plan, Zone 7 recommended that full channel improvements to contain a 100-year storm flow be made for Lines B-2-1 and B-2-2, which were built to a 15-year design standard. These improvements are not eligible for reimbursement funds (see Table 10).

Although Zone 7 has done some additional studies of the Arroyo in the past 10 years, it has not officially adopted any new criteria. Zone 7 still recognizes the 1985 Corps report and the ultimate flow of 27,000 cfs as setting the design criteria in this reach of the Arroyo. Zone 7 states it will require any proposed improvements to be designed and constructed to meet those criteria before Zone 7 will accept ownership of and/or maintenance responsibility for those improvements.

As noted above, Zone 7's existing program does not include provisions for the construction of upstream detention or retention basins to hold back the peak flows, which would reduce the scale of needed channel improvements downstream. If such measures are integrated into the basin flood control program, the consequent downstream design flow could be reduced.

A final design plan by Zone 7 will require additional flood frequency analysis and project CEQA review. The strategy may include an integrated program of up- and downstream measures to reduce the scale and impacts of channel improvements. This approach would place responsibility for flood control improvements on owners of upstream property contributing to future flood flow impacts, thereby eliminating the need for major downstream improvements and corresponding effects on the riparian corridor of the Arroyo.

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<sup>34</sup> Letter, Vince Wong, Assistant General Manager, Zone 7, to Mundie & Associates, December 13, 1996.



**(4) Cooperative Plan Flood Control Analysis.** The existing 100-year flood is estimated at 318 feet at the north side of the Bernal Avenue bridge. Upstream channel improvements have not been made to protect development from the 100-year flood with the existing water surface elevation at Bernal Avenue. Flood control improvements, eliminating the vegetated channel as well as widening, would lower the flood elevation here and would remove a number of upstream areas from the 100-year flood plain. For instance, lowering the 100-year water surface north of the Bernal Avenue bridge to about 316 feet would be needed in order to remove the upstream Valley Trails subdivision from the flood plain.

Due to limited information available at the time, previous analyses had limited peak design water surface elevation immediately downstream of the bridge to 314 feet to evaluate flood control improvement alternatives. This WSEL was reanalyzed as part of the Cooperative Plan effort. One of the objectives of the reanalysis was to determine whether a higher water level elevation at the bridge could be used for flood control planning purposes without subjecting upstream areas to flooding. If so, then the scale of the downstream flood control improvements that the 314-foot elevation would require could be reduced.

The re-examination of the water surface elevation included the following considerations:

- The FEMA 100-year flood elevation is at the Bernal bridge 317 feet on the south side and 318 feet on the north side. The existing bridge would, therefore, accommodate FEMA's 100-year flow of 17,000 cfs.
- COE requirements for existing bridges is one foot of freeboard under the bridge (i.e., the 100 year flood level should not be closer than one foot to the lower surface of the bridge). Therefore, the existing bridge is sufficiently above the existing FEMA 100-year WSEL to meet COE requirements for existing bridges. Lowering of the water surface by any amount as a result of downstream improvements would provide even greater freeboard under the existing bridge.
- The City's design (3/21/95) for the proposed new Bernal Avenue bridge uses a minimum soffit elevation of slightly more than 318 feet. If the maximum water surface elevation at the bridge is held at 316 feet, this would provide slightly more than two feet of freeboard under the new bridge, consistent with Zone 7 requirements. Additionally, the design of the new bridge could be raised even higher to allow for greater freeboard if necessary.
- The Laguna Oaks project upstream of the site was designed for the FEMA 100-year storm flow of 17,000 cfs and flood elevations of 318 feet. This design would allow first floor building pad elevations to be a minimum of one foot higher than a maximum flood elevation of 318 feet on the north side of the Bernal bridge (or 317 feet on the south side of the bridge). If the water surface elevation at the bridge is lowered to 316 feet south of the bridge, this would provide even greater protection to the upstream development.
- A water surface elevation of 316 feet at the south side of the bridge is consistent with achieving upstream 100-year flood objectives. In particular, it would remove those areas along the Arroyo de la Laguna upstream of the bridge, lower Arroyo Mocho, and Alamo Canal (Del Prado, Valley Trails, and Commerce Circle) from the 100-year flood plain.
- Pleasanton policy has consistently supported preservation of the Arroyo de la Laguna riparian corridor in its natural state. (Relevant sections of the Conservation and Open Space Element of the Pleasanton General Plan are reviewed in Chapter 6.) An approach to flood control that minimizes the level of in-channel improvements required would be more in keeping with this policy than an approach that requires extensive improvements.

The conclusion of the analysis was that designing for a WSEL of 316 at the bridge under the 100-year flood flow would be consistent with all 100-year flood design parameters.

Cooperative Plan project consultants utilized the WSEL of 316 feet at the bridge in hydraulic runs conducted in November 1995 to estimate the capacity of the existing channel as approximately 15,500 cfs. A maximum WSEL of 314 ft. at the bridge would result in an existing channel capacity of 10,000 cfs; a WSEL of 317 ft. would yield bank-full capacity of approximately 17,000 cfs.

Pleasanton staff (Roger Higdon, August 1996) observes that the 100-year flood zone at Laguna Oaks is below elevation 318 feet. The modifications to the existing Bernal Avenue bridge abutments within the Arroyo, which restrict flow, and the design for the new Bernal Avenue bridge to accompany the old bridge, are being carried out according to design specifications set forth by the City of Pleasanton Public Works Department consistent with the City's policy of adopting the 1984 FEMA flow of 17,000 cfs as the 100-year standard.

**(5) Surface Water Quality.** Water runoff during storm or flood events carries loose soil (and substances applied to the soil for various purposes) to surface waters, including drainage channels and streams. The composition of runoff from the site under the existing condition has not been analyzed. Based on the history of site use, such runoff may contain, in addition to soils, agriculture-related substances (such as fertilizers and pesticides) that may have been used over the years, and any other substances applied to the surface of the land that may still remain in trace amounts. These substances, as well as the soil itself, contribute to pollutant loads and turbidity in surface waters such as, for example, the Arroyo de la Laguna.

### **3. Impacts**

Drainage and flooding impacts would be significant if (1) the project would contribute significantly to downstream flooding; (2) the project would not adequately protect onsite development from flooding; (3) the design of the project would not accommodate implementation of flood control alternatives within the reach of the Arroyo de la Laguna along the site; and/or (4) the project would fail to provide adequate protection of water quality.

Effects on flooding are considered significant if the project would result in the flooding of lands either on or off the site under the 100-year flood as described by FEMA (mapped for the site in Figure 13). Flooding from the Arroyo de la Laguna under flood events in excess of the 100-year storm, if such flooding should occur, is an impact of the project, but is not considered a significant impact under federal, state, and City of Pleasanton policy, and there is no requirement to mitigate for flood events in excess of the 100-year storm.

#### **a. Impacts of the Cooperative Plan and the Preferred Plan**

**(1) Potential Contribution to Downstream Flood Flows If Onsite Flows Are Not Properly Contained and Managed.** To assure that the project will not contribute to downstream flood flows under the 100-year storm event, the project would include detention/retention facilities to impound flows on site for release when storm waters subside. In the absence of appropriately sized facilities, or if the facilities do not regulate releases of impounded flows in a manner coordinated with overall flood basin management by public agencies, the project could contribute to the peak flow conditions and downstream channel erosion under the 100-year event. Because the project is intended to include adequate facilities to assure no net runoff, a significant impact would occur only if the project is not implemented in a manner that includes the built-in mitigation proposed.



**Impact B1.     Runoff from the site under the 100-year flood may contribute to cumulative downstream flooding and channel erosion if onsite facilities are improperly sized or managed.**

**(2) Potential for Onsite Flooding.** While the portion of the West Parcel proposed for residential development lies completely outside the 100-year flood plain established by FEMA, it lies substantially within the flood plain of floods greater than the FEMA 100-year event. Federal rules and City policy establish the 100-year event as the largest flood which requires mitigation efforts. Thus, the measure of significant impact used in this EIR is inundation due to the FEMA 100-year flood. Since no portion of the site proposed for development lies within the FEMA 100-year flood, no significant impact is found. Because other estimates of the 100-year flood, existing or in the future, show that the site would be potentially subject to flooding (absent any drainage basin improvements), Impact B2 has been identified but is not considered a significant impact.

Localized flooding from out-of-bank flows along side channels (B-2-1, B-2-2, etc.) may occur during storms larger than their design capacities (generally, the 15-year storm event).

**Impact B2.     The site under its current condition has a potential for flooding from the Arroyo de la Laguna when flood flows exceed the FEMA 100-year flood event.**

This impact is not considered significant; mitigation is optional.

**Impact B3.     Localized flooding may occur due to storms in excess of design capacities of side channels or culverts.**

**(3) Accommodation of Solutions to Management of Upstream Flows.** The project addresses the inadequacy of the Arroyo de la Laguna to carry projected flood flows consistent with overall basin flood management planning in two ways: through the Cooperative Plan strategy of increasing flow capacity to 18,500 cfs, and by providing (via appropriate setback) for accommodation of a range of alternative regional flood control improvements on the site.

***Cooperative Plan Strategy.*** During the Cooperative Plan process, a flood control strategy was developed that includes the following design elements:

- designing downstream flood control improvements (adjacent to the project) consistent with upstream improvements and physical conditions, and
- reducing Arroyo flood control improvements and impacts on riparian habitat by accommodating the amount of flow that could reasonably be contained within the design of the golf course.

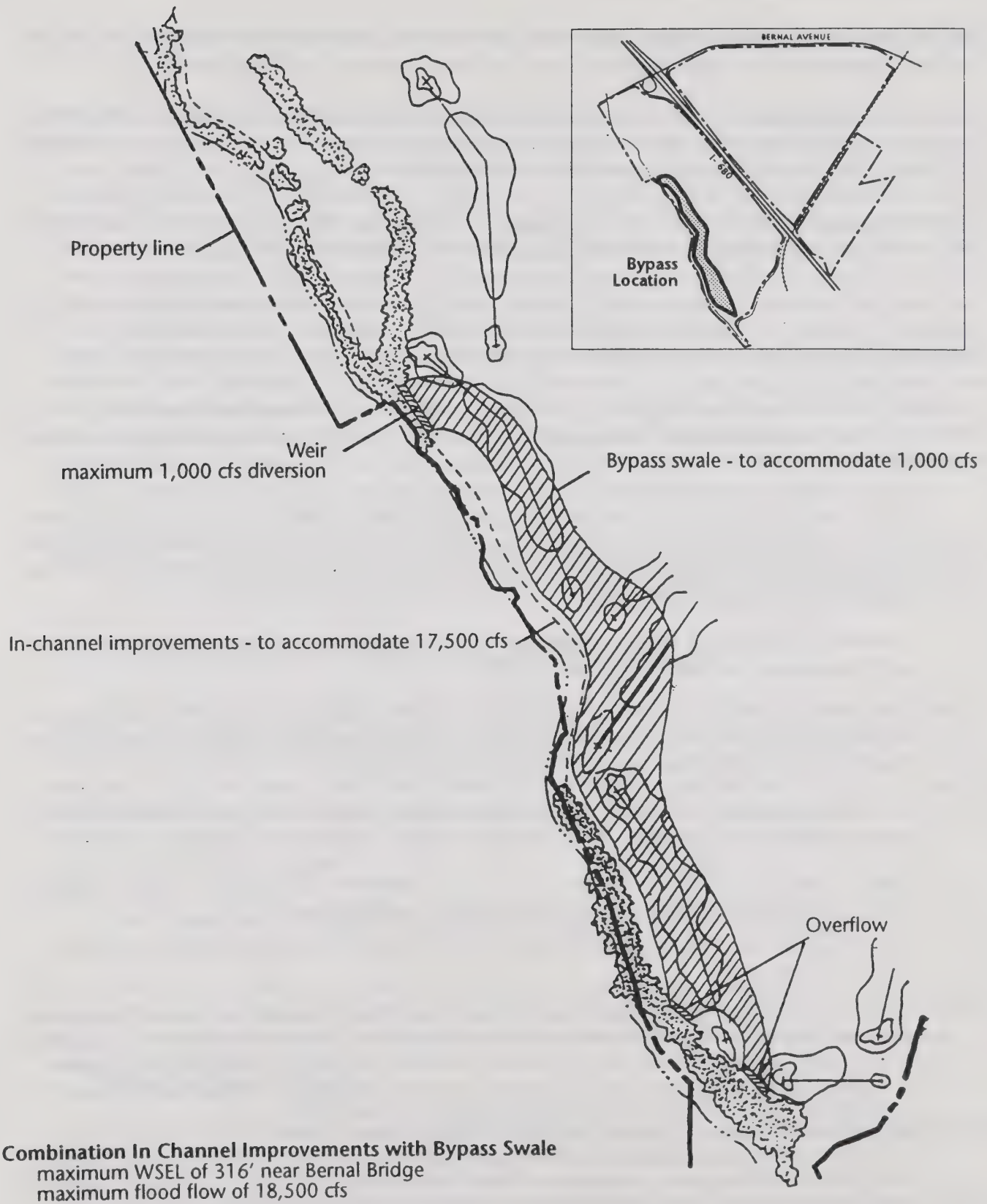


Figure 14

## Bypass Channel

Source: Lamphier & Associates



This design concept (see Figure 14) resulted in a bypass alternative that could divert a portion of the flow from the Arroyo through a bypass swale constructed in the golf course on the West Parcel.<sup>35</sup>

The diversion facility would consist of a side channel with a weir. The weir would be located about 1/3 of the way down the Arroyo within the project site. From that point, a swale would be constructed paralleling the Arroyo, rejoining it at the southern end of the project site.

The swale concept would be implemented in conjunction with minor in-channel improvements necessary to increase the capacity of the Arroyo to 18,500 cfs upstream of the weir and 17,500 cfs downstream.

The design of the swale – a bottom width of approximately 200 feet and side slopes of approximately 10 horizontal : 1 vertical – would accommodate a flow of 1,000 cfs at a depth of approximately two feet. No flow would occur within the swale until the peak flow from the Arroyo exceeds approximately 16,500 cfs.

Combined, the in-channel improvements and the bypass swale could accommodate a maximum flow of 18,500 cfs, the flows anticipated as being capable of reaching the site based on upstream improvement capacities and constraints.

*Setback from the Arroyo de la Laguna.* Through the Alameda County EIR process, Zone 7 recommended that Arroyo flood control improvements be undertaken to increase the flow capacity of the Arroyo to 27,000 cfs. Such improvements were not made part of the Cooperative Plan or made conditions of the County approval for the following reasons:

- Because it includes onsite detention/retention facilities, the project would not increase the 100-year post-development stormwater runoff from the site.
- Even without onsite detention/retention, the project's contribution to increased stormwater runoff in the Arroyo is minimal and insignificant (see Table 8). No nexus can be established between project impacts and a mitigation that would require such improvements.
- Zone 7 is the agency responsible for effecting any improvements to the Arroyo with financing through SDA 7-1 drainage fees.
- Zone 7 criteria of a maximum flow of 27,000 cfs exceeds the criteria applied to other upstream property improvements, and Zone 7 is reviewing this flow at this time.

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<sup>35</sup> Use of the swale for flood control purposes would occur only if Zone 7 or other appropriate governmental agency decides to incorporate this feature into a program of flood control improvements to the Arroyo, meeting the following criteria of San Francisco (as the golf course operator) with regard to swale design and operation:

- a. Assumptions of a maximum WSEL of 316 ft. at Bernal, a maximum flow within the Arroyo through the project of 18,500 cfs, and a maximum velocity of bypassed storm flows of 2.5 feet per second;
- b. Side slopes of 10 horizontal:1 vertical to be compatible with golf course development;
- c. The bypass channel shall not unnecessarily interfere with the operation, maintenance, and configuration of the golf course;
- d. Zone 7 or other benefiting parties to implement in-channel improvements within the Arroyo to increase the channel capacity to a minimum of 17,500 cfs, and connect the golf course bypass swale to the Arroyo;
- e. Zone 7 shall agree to provide a credit against the obligation to pay drainage fees in an amount equal to the total cost of the swale, or other parties provide the funds to pay the total costs of the swale; and
- f. Zone 7 must act to guarantee the fee credit by June 1997 or upon approval of the mass site grading permit, whichever is later.

Implementation of this measure would require Zone 7's acceptance before a statement of consistency with Zone 7 plans can be made.

- There is a desire to maintain as much of the aesthetic and riparian habitat value of the Arroyo as is reasonably possible.

However, the Cooperative Plan consultants evaluated a number of alternative in-channel improvements to increase the capacity of the Arroyo beyond the FEMA flow of 17,000 cfs or the 18,500 cfs of the Cooperative Plan. These improvements considered would increase the capacity of the Arroyo to between 17,000 cfs and 27,000 cfs at WSELs of either 314 feet or 316 feet just south of the Bernal Avenue bridge, as described in Chapter 4 under Option 5. The Cooperative Plan would provide sufficient right-of-way and setbacks along the Arroyo to allow Zone 7 or other public agencies to implement necessary regional storm drainage improvements. All of these would require some amount of developable land (beyond the existing top-of-bank) to accomplish the channel widening.

Zone 7 is currently reviewing its flood control plans for the Arroyo de la Laguna. If development on this site occurs before agreement on a flood control plan is reached by all agencies (Army Corps of Engineers and California Department of Fish and Game, in addition to Zone 7), then some options may be foreclosed (including a channel widening greater than those accommodated by the proposed easement and provision of a parallel channel that would provide for a complete bypass of the Arroyo under flood conditions in excess of the 100-year FEMA event), or the cost and complexity of implementing them would be increased.

<b>Impact B4.</b> <b>Development of the project could conflict with implementation of future Zone 7 regional flood control plans for the Arroyo de la Laguna south of the Bernal Avenue bridge.</b>
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#### **(4) Potential for Impacts on Water Quality and Other Resources.**

**Water Quality.** Surface water quality can be adversely affected by development due to an increased pollutant load in runoff. These impacts can occur both during construction and over time. During construction, earth movement can increase the turbidity of the runoff and construction equipment can introduce pollutants to surface waters. Additionally, construction debris may enter the water course. Over the long term, pollutants caused by development include petroleum wastes, silt, landscape debris, heavy metals, herbicides, pesticides, and fertilizers. Golf courses and other irrigated areas can introduce fertilizers or pesticides into the water courses.

**Other Resources.** The potential for changes in existing drainage facilities to have adverse impacts on cultural resources is addressed in Chapter 5, Part M; on biological resources, in Chapter 5, Part O.

<b>Impact B5.</b> <b>Potential for degradation of surface water quality.</b>
--

#### **b. Impacts of Alternative 2**

**(1) Potential Contribution to Downstream Flood Flows If Onsite Flows Are Not Properly Contained and Managed.** Same as the Cooperative Plan and Preferred Plan.

**(2) Potential for Onsite Flooding.** Flood protection provisions for Alternative 2 have not been specified. They would, however, be similar to those of the Cooperative Plan.



**(3) Accommodation of Solutions to Management of Upstream Flows.** Like the Cooperative Plan and the Preferred Plan, Alternative 2 development could limit some of the flood control improvements to the Arroyo de la Laguna that Zone 7 might otherwise consider.

**(4) Potential for Impacts on Water Quality and Other Resources.**

**Water Quality.** Water quality effects of the lake features in Alternative 2 have not been analyzed. It is possible that the increase in perimeter of surface waters resulting from the lake features may make control of pollutants in runoff more difficult than would be the case under the other three site plan alternatives considered in this EIR.

**Other Resources.** The potential for changes in existing drainage facilities to have adverse impacts on cultural resources is addressed in Chapter 5, Part M; on biological resources, in Chapter 5, Part O.

**c. Impacts of Alternative 3**

Under Alternative 3, the site would be developed under an Alameda county specific plan, rather than in the City of Pleasanton. The impacts of development under that arrangement are addressed in the County EIR, Chapter 4.4.

**4. Mitigation**

**Impact B1.** Runoff from the site under the 100-year flood may contribute to cumulative downstream flooding and channel erosion if onsite facilities are improperly sized or managed.

**Measure B1a.** Provide for onsite detention/retention of storm waters to offset the effects of the increase in runoff to the Arroyo resulting from site development, and prepare a maintenance plan for detention/retention facilities.

Onsite detention/retention facilities should be sized to retain/detain the increased runoff expected under a 100-year storm event. The facilities would include impoundments in the golf course and public open spaces.

**Measure B1b.** The detention/retention facilities should be operated to contain and release runoff at a rate consistent with the Zone 7 Master Plan.

Measures B1a and B1b will mitigate Impact B1 to a less-than-significant level.

**Impact B2.** The site under its current condition has a potential for flooding when flood flows exceed the FEMA 100-year flood event.

Flooding in excess of the FEMA 100-year flood is not considered a significant project impact, and mitigation of the impacts of those floods is optional. Because there are differences of opinion on the question of future flow volume under the 100-year storm event, and because these differences include conditions under which 100-year flows would create out-of-bank conditions, the project may choose to implement a mitigation option that responds to Impact B2.

**Measure B2. (Optional)** Investigate feasible measures to protect the site from flood flows in excess of the FEMA 100-year storm event in a manner consistent with feasible grading options and which does not place existing development on the west side of the Arroyo at risk of a FEMA 500-year flood.

If development on the site proceeds before a regional flood control plan is approved by Zone 7 and other responsible agencies, then San Francisco will consider incorporating into any plan for development of its site provisions to protect habitable buildings on the West Parcel against the remote possibility of a 27,000 cfs flood flow. Potential strategies (see Option 4 in Chapter 4) include (1) raising residential pad elevations above the levels that would be affected by a 27,000 cfs storm event and (2) contouring the West Parcel to establish a barrier preventing flooding on the residential portion of the West Parcel under such an event. While neither of these options has been chosen yet, a commitment has been made to provide the additional protection to onsite development without increasing the exposure of offsite development to the risk of flooding under flows greater than the 100-year FEMA event.

The potential impacts of these options on cultural resources are discussed in Chapter 5, Part M; on biological resources, in Chapter 5, Part O.

Implementation of Measure B2 addressing flood events in excess of the FEMA 100-year storm is not required, but would mitigate Impact B2 to a less-than-significant level.

**Impact B3.** Localized flooding may occur due to storms in excess of design capacities of side channels.

**Measure B3.** Design subdivision (channels, culverts, streets, open spaces, retention basins, and site grading) in a comprehensive manner such that no habitable buildings are subject to flooding in a 100-year storm event.

Drainage channels and culverts provided by the project shall meet City of Pleasanton subdivision standards. Site design shall accommodate flows larger than the design storm standards for culverts and drainage channels in streets and/or other drainageways so as not to flood habitable structures. Street and other facilities must be designed to accommodate those flows, either containing them or channeling them to the Arroyo de la Laguna without flooding habitable structures.

Implementation of Measure B3 will reduce Impact B3 to a less-than-significant level.

**Impact B4.** Development of the project could conflict with implementation of Zone 7 regional flood control plans for the Arroyo de la Laguna south of the Bernal Avenue bridge.



**Measure B4a. Implement the Cooperative Plan bypass proposal, if satisfactory to Zone 7.**

The developer would offer to make the bypass feature a part of the golf course if Zone 7 accepts the Cooperative Plan strategy for improving this section of the Arroyo (minimal in-channel improvements, coupled with bypass, for a 18,500 cfs flow; see conditions presented in Footnote 35). If this option is adopted by Zone 7, the project would be consistent with the regional flood control plan and would implement a portion of it with its development (constructing the bypass in the golf course).

If Zone 7 and other responsible public agencies do not accept the bypass channel concept as part of the regional flood control management plan, then alternate mitigation may include:

**Measure B4b. Set back development sufficiently to accommodate a flow of 27,000 cfs (with WSEL of 316 feet as illustrated in Figure 8H) in a channel widened to the east only; if Zone 7 adopts a Master Plan for regional flood control prior to the submittal of the project grading plan, adjust setback consistent with that plan.**

The project has proposed a maximum setback of approximately 130 feet from the Arroyo centerline (see Figure 8H). This setback would accommodate a range of feasible earthen-bank channel improvement options. The proposed mitigation measure would accommodate the widest in-channel improvement consistent with project objectives and Zone 7 standards.

**Measure B4c. Coordinate any channel improvement plans undertaken by Zone 7 with the development of the West Parcel, if these improvements can be timed in accordance with the developers' timetable for development of the West Parcel.**

Measures B4a and B4b allow a range of feasible options. Implementation of either would mitigate the project's potential conflict with Zone 7's regional flood control plans for the Arroyo de la Laguna south of the Bernal Avenue bridge to a less-than-significant level. This mitigation may preclude other options (including a full bypass channel and widening sufficiently to allow full vegetation of the channel bottom), but these options have not been addressed here in light of the fact that the mitigation proposed reduces impacts to a less-than-significant level and because they are not likely to be feasible either for the project (because land requirements would be far more extensive) or for Zone 7 (because they are much more costly).

Measure B4c would alleviate construction concerns, assuming Zone 7 can determine the desired improvements, obtain the necessary permits, and commence construction before the development of the property begins.

**Impact B5. Potential for degradation of water quality.**

**Measure B5a. Develop a stormwater quality management program.**

Prior to approval of a mass site grading permit, require preparation of a stormwater quality management program that conforms to the Best Management Practices specified in Pleasanton's Clean Water Program for urban runoff and meets the requirements of the NPDES program with respect to construction-related pollutant discharges.

The program may include some of the following elements:

- Interception, through the use of catch basin traps, retention/sedimentation basins, or other filtering mechanisms, of urban runoff originating from roadways and parking areas. This runoff, which may contain oil or chemical pollutants, should be intercepted prior to reaching natural or manmade drainage courses. Landscaped and other natural areas can be used to absorb stormwater-borne pollutants. Include in the plan, to the greatest extent possible, vegetated swales to carry runoff.
- Use of onsite stormwater detention ponds for settling and filtration of pollutants.

**Measure B5b. Prepare a water quality management plan for the golf course, driving range and parks.**

Prior to final approval of the golf course design, require preparation of a water quality management plan for the golf course, driving range, and parks. This plan should address appropriate choice and use of plant materials, fertilizers, and pesticides. (See also Measure C5b.)

Implementation of Measure B5a and B5b would mitigate Impact B5 to a less-than-significant level and may improve water quality compared with the current agricultural use of the property. Cumulative Impact P1 addresses cumulative impacts on surface water quality.

#### 4. Summary Comparison of Impacts and Mitigated Impacts: Drainage

	Cooperative Plan	Preferred Plan (Alternative 1)
<b>Impact B1.</b> Runoff from the site under the 100-year flood may contribute to cumulative downstream flooding and channel erosion if onsite facilities are improperly sized or managed.	S(C)/LS	S(C)/LS
<b>Impact B2.</b> The site under its current condition has a potential for flooding when flood flows exceed the FEMA 100-year flood event.	LS/*	LS/*
<b>Impact B3.</b> Localized flooding may occur due to storms in excess of design capacities of side channels.	S/LS	S/LS
<b>Impact B4.</b> Development of the project could conflict with implementation of Zone 7 regional flood control plans for the Arroyo de la Laguna south of the Bernal Avenue bridge.	S/LS	S/LS
<b>Impact B5.</b> Potential for degradation of water quality.	S(C)/LS	S(C)/LS

Key: \*/\*: significance before mitigation/significance after mitigation.

S: significant

(C): contributes to cumulative impact

LS: less than significant

n.a.: impact does not apply to this alternative

\* no mitigation required

ND: not determinable

† Less than significant before mitigation, but contributes to cumulatively significant impact.

NM: no mitigation possible (beyond policies, programs, and other regulations already in place).



## C. INFRASTRUCTURE SYSTEMS: WATER

### 1. Characteristics of the Project

Two types of project characteristics are discussed in this section: (a) the project's demand for water, which will determine its impact on supply, and (b) the elements of the water distribution/storage system that are included in the plan, which will determine its impact on the City's water system. The discussion of demand considers the need for potable (drinkable) water separately from the need for irrigation water (which is expected to be satisfied with groundwater or recycled water). The discussion of water system elements considers not only the water mains and onsite distribution pipelines, but also the potential for construction of a pipeline to deliver recycled water to the project site.

#### a. Demand for Water

**(1) Demand for Potable Water.** Development of the site according to the Cooperative Plan or the Preferred Plan would require potable water for drinking and landscape irrigation. The golf course is proposed to be watered primarily with groundwater from onsite wells or recycled water when it becomes available. Estimates of average day water use by uses permitted on the project site are summarized in Table 11.

The average day demand shown in Table 11 is translated into peak day and annual demand in Table 12. The Preferred Plan would use slightly more water (approximately 378 million gallons, or 1,160 acre-feet, per year) than the Cooperative Plan (approximately 366 million gallons, or 1,123 acre-feet, per year).

**Table 12**  
**Average Day, Peak Day, and Annual Potable Water Use:**  
**Cooperative Plan and Preferred Plan**

	<b>Average Day (Million Gallons)</b>	<b>Peak Day (Million Gallons)</b>	<b>Year (Million Gallons)</b>	<b>Year (Acre-Feet)</b>
Cooperative Plan	1.00	3.01	365.82	1,123
Preferred Plan	1.04	3.11	377.96	1,160

Source: Table 11; peak day factor is 3.0; annual use is 365 times average day (including golf course; this approach is the standard, and recognizes that irrigation typically occurs an average of 300 days rather than 365 days).

**(2) Demand for Groundwater.** The golf course, except for the tees and greens, would be irrigated with groundwater until such time as recycled water is available. Estimated demand for groundwater (and, later, recycled water) is summarized in Table 13.

The average day water use estimates for the golf course are translated into peak day and annual use estimates in Table 14. The golf course in the Cooperative Plan, which would have 147 acres irrigated with groundwater, would use approximately 120 million gallons of water per year; the course in the Preferred Plan, with about 158 acres irrigated with groundwater, would use about 129 million gallons per year. These figures are equivalent to 367 acre-feet and 395 acre-feet per year, respectively.

**Table 11**  
**Average Day Potable Water Use:**  
**Cooperative Plan and Preferred Plan**

<b>Land Use</b> <b>(Measurement Units)</b>	<b>Amount of New Development</b>	<b>Demand in GPD (gallons per day) per Measurement Unit</b>	<b>Total Gallons per Day</b>
<b>Cooperative Plan</b>			
Medium Density Residential (Units)	1,520	440	668,800
High Density Residential (Units)	380	331	125,780
Commercial/Office/Retail (Sq. Ft.)	577,000	0.2	115,400
Community Facilities, Area (Acres)	1	1,080	1,080
Schools (Acres)	5	400	2,000
Parks (Acres)	30	2,230	66,900
Golf Course (Tees and Greens) (Acres)	10	2,230	22,300
<b>Total</b>			<b>1.00 mgd</b>
<b>Preferred Plan</b>			
Medium Density Residential (Units)	1,520	440	668,800
High Density Residential (Units)	380	331	125,780
Commercial/Office/Retail (Sq. Ft.)	577,000	0.2	115,400
Community Facilities, Area (Acres)	15.3	1,080	16,524
Schools (Acres)	10	1,400	14,000
Parks (Acres)	32.6	2,230	72,698
Golf Course (Tees and Greens) (Acres)	10	2,230	22,300
<b>Total</b>			<b>1.04 mgd</b>

\* School building use only, playfield is included in park acreage.

\*\* Based on average of similar Pleasanton elementary schools with playfields.

Source: Land use assumptions are taken from Table 4. Residential units assigned to single-family and multi-family as per Pleasanton staff. Water use factors are taken from Pleasanton General Plan and/or Pleasanton Water Master Plan.

**Table 13**  
**Average Day Golf Course Non-Potable Water Use:**  
**Cooperative Plan and Preferred Plan**

<b>Land Use</b> <b>(Measurement Units)</b>	<b>Amount of New Development</b>	<b>Demand in GPD (gallons per day) per Measurement Unit</b>	<b>Total Gallons per Day</b>
<b>Cooperative Plan</b>			
Golf Course (Non-tees, -greens) (Acres)	147	2,230	327,800
<b>Preferred Plan</b>			
Golf Course (Non-tees, -greens) (Acres)	158.2	2,230	352,800

Source: Estimate of land devoted to tees and greens from Dan Bucko, RealGolf; water use per acre from Table 11



**Table 14**  
**Average Day, Peak Day, and Annual Golf Course Non-Potable Water Use\***  
**Cooperative Plan and Preferred Plan**

	<b>Average Day (Million Gallons)</b>	<b>Peak Day (Million Gallons)</b>	<b>Year (Million Gallons)</b>	<b>Year (Acre-Feet)</b>
<b>Cooperative Plan</b>	0.33	0.98	119.65	367
<b>Preferred Plan</b>	0.35	1.06	128.77	395

\* Non-tees and -greens areas.

Source: Table 11; peak day factor is 3.0; annual use is 365 times average day use (standard calculation method, recognizing that irrigation typically occurs an average of 300 days rather than 365 days).

## **b. System components**

**(1) Local Main and Delivery Systems.** To deliver needed potable water, the project includes:

- **Construction of two water mains.** One main would connect the existing water line that ends at the intersection of Bernal Avenue and Valley Avenue to the existing line that ends at the intersection of Bernal Avenue and Case Avenue. This main would have a 12-inch diameter. The second main would connect the existing line at Bernal Avenue/Valley Avenue to an existing main at the intersection of Junipero Avenue and Case Avenue. This main would be 16 inches in diameter. These two new water mains are shown in Figure 15 (p. 93).
- **Construction of local (within-project) delivery systems to serve development and landscaped areas on the project site.** These systems would meet City standards for looped systems with adequate capacity to meet operational and fire flow demand for the proposed land uses. The eight-inch line that would serve the West Parcel is also shown in Figure 15.

The San Francisco Water Department currently delivers water to the Castlewood Country Club (see p. 97) via an existing water main. SFWD guarantees uninterrupted delivery of water to Castlewood in case it becomes necessary to move or modify this main to complete development on the project site.

**(2) Construction of Recycled Water Pipeline.** Although portions of the golf course, and potentially all public landscaped areas, would initially be irrigated with groundwater, the irrigation system would be switched to recycled water once water of appropriate standards is available. The project would provide for the future construction of a recycled water pipeline from the DSRSD treatment plant to the project site when water of appropriate quality is available. A pipe 12 inches in diameter could serve the specific plan site; the ultimate size would depend on how the final onsite delivery system is designed. If a project should be approved to serve other recycled water applications en route or further downstream (e.g., Castlewood County Club), a larger pipe size would be specified.

The project description provides that the project will pay its fair share of providing recycled water to the project for irrigation of the golf course and parks and will participate in exploring feasibility of providing recycled water elsewhere in the project area vicinity. Local groundwater wells may be used for irrigation of the golf course and other public landscaping until the recycled water line is feasible to install. (Cooperative Plan Recommendations, p. 5) This provision is consistent with the Pleasanton General Plan,

which states that water reclamation methods should be used “to the fullest extent feasible” (Public Facilities Element Program 4.6).

The recycled water line would be subsurface. Water would be moved through the line by a pump station, capable of delivering maximum day demand over a 24-hour period, constructed at the WWTP. A storage reservoir, if needed, could be integrated into the golf course as a water feature.

Potential construction routes lie within or along the corridors of existing public facilities including the I-680 freeway, the Arroyo de la Laguna, and/or public streets. For the purposes of this EIR, an alignment within the banks of the flood control channel that parallels I-680 is assumed. More specifically, this route would originate at the WWTP and crosses the Arroyo de la Laguna to run along the top of the west bank in Zone 7’s right-of-way to the point where the Arroyo del Valle joins the Arroyo de la Laguna. From that point, the line can cross under the I-680 freeway or be suspended from the freeway bridge so as to avoid creek habitat, and continue south on either side of the Arroyo de la Laguna (in the channel right-of-way) to the specific plan site. This alignment utilizes existing public rights-of-way and does not involve construction in any location where trees or significant vegetation would be affected. Alternate routes are described on pp. 100-101.

## **2. Setting**

Sources of water supply in the Pleasanton area include surface runoff, imported water, and groundwater (from Zone 7 and City of Pleasanton wells).

### **a. Water Supply and Demand**

**(1) Regional Supply.** Zone 7 of the Alameda County Flood Control and Water Conservation District (ACFCWCD Zone 7) is the water wholesale provider to the Tri-Valley area. The agency also regulates withdrawal and recharge of the underlying groundwater basin. Zone 7 treats surface water and distributes it, supplemented with groundwater, to various cities and unincorporated areas based on individual water delivery schedules. Zone 7’s major customers are Pleasanton, the Dublin-San Ramon Services District (DSRSD), the City of Livermore and the California Water Service.

**(a) Surface Runoff.** Zone 7 holds the water rights for flows of surface runoff in Lake del Valle. Local runoff is captured in Lake del Valle under agreement with the State Department of Water Resources. This runoff is either treated and used directly, or recharged into the groundwater basin for later recovery.<sup>36</sup> Surface water runoff from the Arroyo del Valle drainage area to the Lake del Valle reservoir is estimated by Zone 7 to average 7,000 acre-feet per year. This estimate is based on production records from 1969 to 1990, including the recent drought years through 1990.

Long-term water storage may be provided by the “Chain-of-Lakes” quarry reclamation facility currently being constructed by various quarry operators in the Livermore-Amador Valley pursuant to the *Specific Plan for Livermore-Amador Valley Quarry Area Reclamation*, a project intended primarily to convey water from the Arroyo del Valle to groundwater recharge areas in eastern Pleasanton.<sup>37</sup>

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<sup>36</sup> Zone 7 Water Supply Planning Report, Camp Dresser & McKee Inc., January 1994.

<sup>37</sup> Recycling Study.



(b) *Imported Water.* Zone 7 also obtains water from the State Water Project (SWP). In 1995, Zone 7's contract with the SWP calls for up to 42,000 acre-feet per year of water to be provided to Zone 7. This entitlement is to be increased by 2,000 acre-feet per year until 1997, when the maximum of 46,000 acre-feet per year is reached. In drought years, SWP deliveries have been significantly less than the amounts requested by water wholesalers, including Zone 7. In 1991, for example, Zone 7 received only 30 percent of the water requested; in 1992, Zone 7 received 64 percent of its contractual amount.<sup>38</sup>

(c) *Groundwater.* Groundwater, the third source of water for the Livermore-Amador Valley, is discussed in detail beginning on p. 95.

**(2) *Local (City of Pleasanton) Supply and Demand.*** Pleasanton supplements the water it obtains from Zone 7 with water from wells owned by the City. The City's contract with Zone 7 obligates Pleasanton to obtain all its water supplies beyond its own well water from Zone 7, and obligates Zone 7 to try to meet all of Pleasanton's requests for water. Pleasanton has historically obtained between 60 and 75 percent of its water supply from Zone 7 with the balance, 25 to 40 percent, coming from its own wells.

(a) *Water Supply.* Water from Zone 7 is generally supplied to Pleasanton through turn-outs to the Pleasanton water system at pressures sufficient to fill Pleasanton's Lower Pressure Zone tanks. The turn-outs currently have the capacity to supply approximately 25.4 million gallons of Zone 7 water per day. Adding the capacity of Pleasanton's own wells at 11.9 million gallons per day results in a total supply capacity of 37.3 million gallons per day. Pleasanton's maximum day demand (1995) is estimated to be 26.6 million gallons, well below the existing supply capacity. Historical and projected peak water day supply (which includes excess storage capacity) and demand are summarized in Table 15.

(b) *Water Delivery System.* The existing Pleasanton water system is currently providing adequate service in the vicinity of the study area.

*Distribution System.* The City of Pleasanton's potable water system includes a loop system of pipelines near the site, as shown in Figure 15:

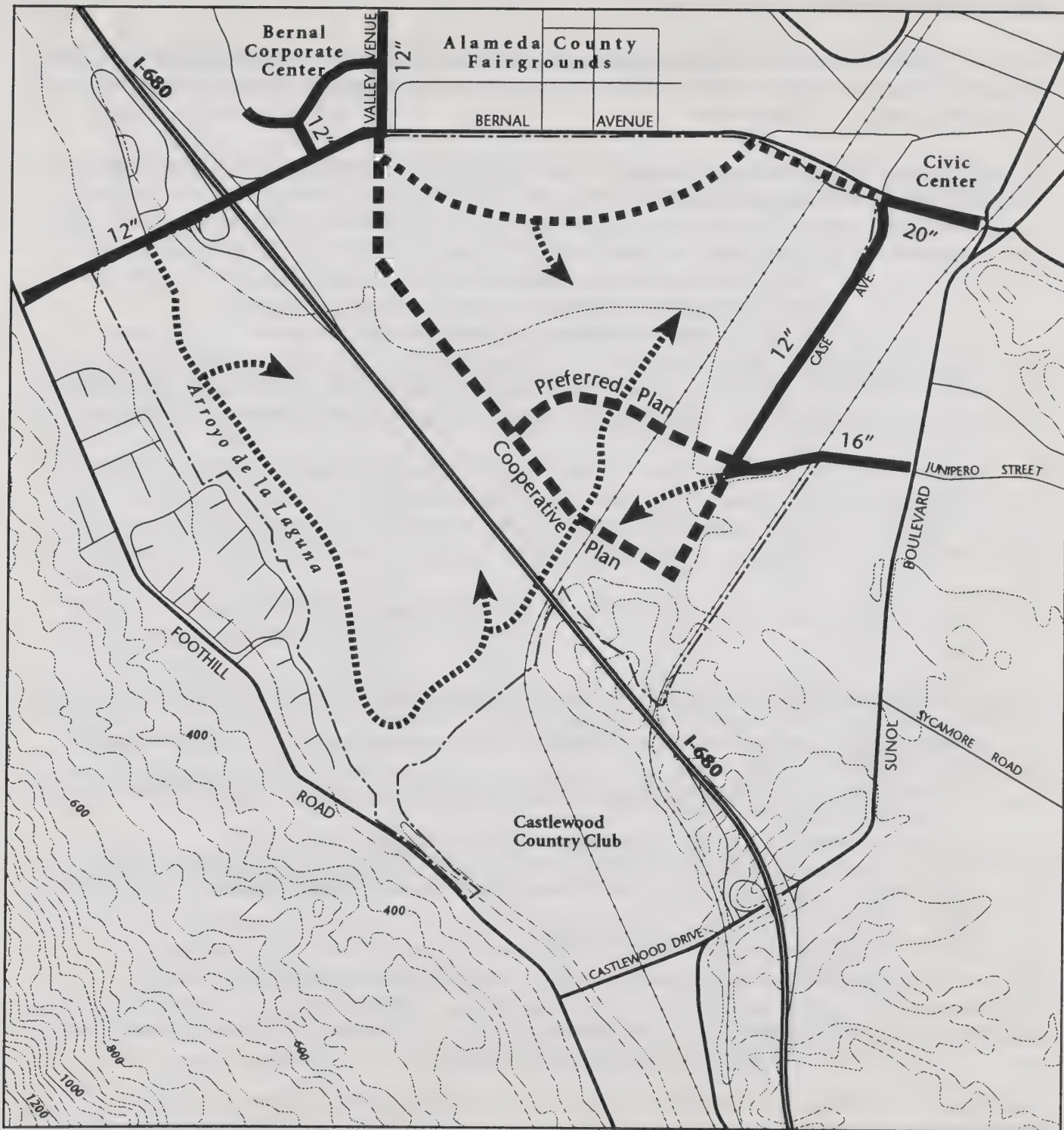
▪ Koll Center Drive	12-inch	▪ Junipero Street	12-inch
▪ Valley Avenue	12-inch	▪ Sunol Boulevard	parallel lines, 16- and 12-inch
▪ Bernal Avenue, west of Valley	12-inch	▪ Castlewood Dr.	16-inch
▪ Bernal Avenue, east of Case	20-inch	▪ Foothill Road	12-inch*

- \* The existing 12-inch line in Foothill Road does not currently serve the Lower Pressure Zone. The Lower Zone line along Foothill, between Castlewood and Bernal, will be completed by 1998.

Except for the line in Foothill Road, the pipelines are all part of the larger Pleasanton Lower Pressure Zone, which serves customers up to an elevation of 390 feet. (The Lower Zone Line in Foothill Road will be completed within the next year.) The Pleasanton Lower Pressure Zone has numerous major facilities, including tanks, water transmission facilities, turn-outs from the Zone 7 distribution system, and wells.

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<sup>38</sup> Growth Management Report, August 1994, City of Pleasanton, p. 146.



Source: City of Pleasanton

- ■ ■ ■ ■ Proposed 16" line
- · · · · Proposed 12" line
- · · · · Proposed local line
- — — — — Existing line

Alignments Approximate

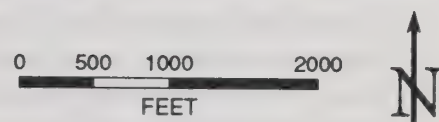


Figure 15  
Water Distribution System



**Storage System.** Water storage tanks are used to provide water to meet the demand of the peak hours of the maximum day. In 1996, existing storage within the Pleasanton system exceeded current needs by approximately 9.0 million gallons.

The project site is located in the lower water pressure zone. This zone had excess maximum day storage capacity of 7.743 million gallons in 1995.

**Table 15**  
**Pleasanton's Peak Day Water Demand Compared to Supply**  
(millions of gallons per day/mgd)

Year	City Wells <sup>a</sup>	Zone 7	Excess Storage <sup>b</sup>	Total Peak Day Supply	Peak Day Demand <sup>c</sup>	Excess Peak Day Supply <sup>c</sup>
1992 <sup>e</sup>	5.0	15.0	2.2	22.2	22.4	-0.4
1993 <sup>e</sup>	8.4	17.4	2.2	28.0	24.6	3.4
1994 <sup>f</sup>	8.4	25.4	9.9	43.7	25.3	18.4
1995	9.0	25.4	10.9	45.3	26.2	19.1
1996	9.0	25.4	9.0	43.4	27.6	15.8
1997	9.0	25.4	9.3	43.7	28.9	14.8
1998	9.0	25.4	9.2	43.6	30.0	13.6
1999	9.0	25.4	8.6	43.0	30.9	12.1

<sup>a</sup> City well pumping capacity is based on an estimate of the "reliable operational capacity" of 9 mgd and not maximum pumping capacity of 12.5 mgd.

<sup>b</sup> Tassajara Reservoir came on line after peak day in 1993; other assumptions consistent with Tables V.d-3 and V.d-7 of the 1996 Growth Management Report.

<sup>c</sup> Maximum day demand figures for 1995 are an estimate based on the actual 1994 data.

<sup>d</sup> A positive number represents the amount of water by which pumping capacity, augmented by available excess storage, exceeds demand. A negative number represents the amount of water required from emergency and/or fire flow storage to overcome pumping shortage.

<sup>e</sup> Actual experience; City Well No. 7 out of service in 1992.

<sup>f</sup> 1994 Zone 7 supply to Pleasanton increased by 8 mgd from Vineyard Avenue Pipeline and new City turnout.

Source: 1992: City of Pleasanton, 1993 Growth Management Report, p. 178; 1993-94, 1994 Growth Management Report, p. 159; 1995-99, 1996 Growth Management Report, p. V.d-16

(c) **Water Demand on the SFWD Site Anticipated by the Pleasanton General Plan.** In its Water Master Plan, Pleasanton anticipated development of the project site and assumed a level of development on the site that is greater than the amount permitted by either the Cooperative Plan or the Preferred Plan. (The Water Master Plan assumed 2,257 housing units, 944,800 square feet of commercial/office development, 40 acres of parks, and a 160-acre golf course). With that amount of development, the Water Master Plan estimated average day demand on the site at 1.51 million gallons per day (1,692 acre-feet per year) and the estimated maximum day demand (calculated as three times the average day demand) at 4.53 million gallons.

**(3) *Groundwater.*** Groundwater is contained in several subbasins in the Livermore-Amador Valley, the most important of which are located in the west-central area of the Valley where the major Zone 7 and City of Pleasanton wells are located.

The Livermore-Amador Valley Groundwater Basin may be characterized as a bedrock-rimmed, sediment-filled bowl. However, geologic conditions and the character of groundwater within the basin are quite variable. In recognition of these conditions, the basin has been subdivided into 12 subbasins (Figure 16 shows the subbasins in the vicinity of the study area). In turn, these have been classified for management purposes into two main areas – the Central Groundwater Basin and Fringe Subbasins.<sup>39</sup>

The project area is located within the Central Basin and overlies the middle portion of the Bernal Subbasin. As shown in Figure 16, the Central Basin encompasses the Valley portions of the Bernal, Amador, and Mocho Subbasins. The Central Basin is characterized by abundant well yields and generally high groundwater quality; it is used to supply numerous municipal wells and for storage of high quality imported water.

The Fringe Subbasins include the Castle, Dublin, Bishop, Camp, Cayetano, May, Vasco, Spring, and Altamont subbasins. These subbasins are characterized by relatively limited groundwater storage, low well yield, and poor water quality. Management concerns in the Fringe Subbasins focus on the potential for poor quality water to migrate into and adversely affect the Central Groundwater Basin.

**(a) *Groundwater Supply.*** Information is also available on the groundwater supply of the Livermore-Amador Valley Basin and the Bernal Subbasin.

It is estimated that the Livermore-Amador Valley aquifer can hold up to 240,000 acre-feet of water. Since 1990, the water level in the aquifer has fluctuated, with the storage ranging between 190,000 acre-feet and 205,000 acre-feet. It is also estimated that the safe average annual net withdrawals (withdrawals less artificial recharge) from the aquifer are 12,800 acre-feet per year,<sup>40</sup> equivalent to 11.9 million gallons a day (mgd). In dry years, that level can be exceeded as long as an average of 12,800 is maintained over a several years.

Groundwater yields in the Bernal Subbasin can be estimated based on published data supplemented by a review of the historic groundwater use and an onsite preliminary aquifer test.

- Published data indicate that pumpage and export of groundwater by the Spring Valley Water Company peaked in 1929 and 1930 at an annual rate of approximately four billion gallons per year. This intense pumpage, coupled with a prolonged drought, resulted in large groundwater level declines in the Pleasanton area. Since that time, historical data indicate that an annual total withdrawal of approximately 1 billion gallons (3,068 acre-feet) per year was accomplished with consequent groundwater level fluctuations of approximately 20 feet.
- Historical production data are available from 17 wells in the Bernal Subbasin. The yields of these wells ranged from 113 gallons per minute to 1,100 gallons per minute. The specific capacities (the yield of a well per unit of drawdown) of wells in this subbasin ranged from 3.5 gallons per minute per foot of drawdown for a well in the northern part of the subbasin, to 261 gallons per minute per foot of drawdown for a well drilled southwest of Pleasanton.<sup>41</sup>

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<sup>39</sup> Livermore-Amador Valley Water Recycling Study (cited below as Recycling Study), Brown and Caldwell, 1992, page 2-6.

<sup>40</sup> Yearly Review of the Sustainable Water Supply, Zone 7, April 1995.

<sup>41</sup> Department of Water Resources, 1974.





Source: Alameda County Flood Control and Water Conservation District  
 Zone 7, Livermore Valley Groundwater Basin Boundaries, Sheet GW, 1989  
 based on DWR, No. 118-2 Figure 3

- Groundwater Basin Boundary
- - - - Valley Floor Boundary
- ..... Subbasin Boundary

0 3000 6000 12000  
 FEET



Note: The Central Subbasin consists of the portions of Bernal, Castle, and Amador Subbasins that are located within the Valley Floor boundary

Figure 16  
**Groundwater Subbasins**



*(b) Rights to Groundwater.* Major claims to groundwater reside with Zone 7, the City of Pleasanton, and the San Francisco Water Department.

Zone 7 has agreements with the water retailing agencies in Livermore, Pleasanton, and Dublin for water supply. These agreements allow the water retailing agencies to pump a specified quota from the aquifer. For amounts greater than their respective quotas, the agencies pay a recharge fee to Zone 7 to replenish the excess amount to the aquifer. Pleasanton's independent quota from Zone 7 groundwater sources is 3,500 acre-feet per year, or an average of 3.1 mgd. In previous drought years, Zone 7's supplies from the State Water Project have been cut back, and this pumping limit has been lifted. In 1991, Pleasanton pumped 5,061 acre-feet of water, or approximately 145 percent of the contractual amount. Once the drought ended, groundwater pumping quotas were reinstituted. Since that time Zone 7 has provided Pleasanton a more typical percentage of the City's water needs (in the 75 percent range, as noted above).<sup>42</sup>

Zone 7 has no control over the amount of water withdrawn from the wells owned by the City of Pleasanton, other than contractual provisions relating to recharge fees and carryover requirements. As indicated above, Pleasanton obtains between 25 and 40 percent of its water from its own wells.

Similarly, Zone 7 has no control over the amount of groundwater the San Francisco Water Department can withdraw from its wells. SFWD purchased the Spring Valley Water Company and its associated overlying water rights in 1930, and water was pumped from as many as 60 wells over time for sale to various users. Four wells north of Bernal Avenue in the Valley Avenue right-of-way continue to provide water to the Castlewood Country Club, pursuant to agreements entered into in 1911 and 1972.

*(c) Groundwater Management.* Groundwater management issues include (1) the amount of water withdrawn from the aquifer, (2) water quality in the aquifer, and (3) the potential for use of recycled water to replenish the groundwater supply.

*Amount of Water Withdrawn.* Zone 7 holds that withdrawals above recent historical patterns (the past five years; approximately 12,800 acre-feet per year) without corresponding increases in recharging would deplete the aquifer and reduce the amount of water available to other groundwater users. Zone 7 has indicated that it will closely examine any net increase in groundwater withdrawals and would pursue mitigations of any such increase.

*Water Quality in the Aquifer.* Any degradation of the groundwater could affect water users both inside and outside the project area. Agencies with water quality responsibilities have therefore been working to establish or implement regulations relating to use of treated wastewater for land application (irrigation) and/or groundwater recharge. An important concern is with the salt loading into the Livermore-Amador Valley aquifer, as measured by total dissolved solids (TDS). The Regional Water Quality Control Board (RWQCB) adopted Zone 7's Wastewater Management Policies as part of its 1985 Basin Plan amendments, which set certain TDS limits on wastewater used for irrigation and/or recharge. In December 1993, the RWQCB issued a Master Permit (Order No. 93-159) to Zone 7, the Dublin-San Ramon Services District (DSRSD), and the City of Livermore as co-permittees for water recycling projects in the Livermore-Amador Valley. This permit sets requirements for any water recycling projects in the valley. Any plan to use recycled wastewater on the project site must conform to this permit as well as to any other RWQCB or Zone 7 regulations.

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<sup>42</sup> Growth Management Report, August 1994, p. 149.



At this time, Zone 7 is working on a salt management plan for the Livermore-Amador Valley aquifer. This plan may result in significantly different regulations on land application and recharge of treated wastewater.

*Wells on the project site.* The Spring Valley Water Company supplied water for the City of San Francisco from wells on the project site. Over time, San Francisco has phased most of these wells out of production. Four wells on the site have been maintained for use in agriculture.

*DSRSD Investigation of Potential for Use of Recycled Water to Replenish Groundwater.* The DSRSD is pursuing the concept of water recycling for replenishment of groundwater. The concept is to use highly treated wastewater (wastewater treated to a standard that would allow its use for landscape irrigation) and then further purify it through microfiltration and/or state of the art reverse osmosis, and then inject it into the groundwater basin. DSRSD envisions that such a groundwater replenishment project would (a) increase disposal capacity (because some of the wastewater that would otherwise have to be pumped out of the Valley could be reused locally instead), (b) improve groundwater quality (because the water produced by the reverse osmosis treatment would be low in salt), and (c) increase local water resources (because water injected into the groundwater basin could, in the future, become part of the local water supply).<sup>43</sup>

## **b. Sufficiency of Water Resources**

**(1) Potable Water and Groundwater.** Zone 7 estimates that, on average, a total of 53,800 acre-feet of water is currently available throughout the Zone 7 service area with existing facilities. This supply is comprised, on average, of:

- 34,000 acre-feet of State Water Project water,
- 12,800 acre-feet of groundwater (Central Groundwater Basin safe yield), and
- 7,000 acre-feet of locally-stored runoff available in the Del Valle Reservoir.

Of this amount, 40,700 acre-feet is determined to be available for municipal use. The remaining 13,500 acre-feet is for present and future agricultural, mining, untreated non-agricultural, and small institutional users. As demands from agricultural and mining uses in the area decline, the amount available for municipal use will increase.

The runoff to Lake del Valle is estimated to be capable of supplying an average of 7,000 acre-feet per year. As noted above and on p. 95, the estimated safe average annual groundwater yield is 12,800 acre-feet per year. Since 1988, annual usage of Zone 7 water by all subscribers has ranged between 26,000 and 32,000 acre-feet. During the same period, Pleasanton's annual water demand has been between 11,800 and 14,800 acre-feet. Zone 7 has annually supplied from 6,800 to 11,500 acre-feet to Pleasanton, with the remainder of the city's water supply coming from Pleasanton's own wells.

Zone 7's sustainable annual supply is estimated at 54,200 acre-feet annually.<sup>44</sup> To meet the anticipated demand of the full buildout of the prospective General Plans in the cities and county in the Zone 7 service area, it is estimated that Zone 7 will require an additional 25,000 acre-feet per year. If general plan

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<sup>43</sup> Clean Water Revival: Recycling for Groundwater Replenishment, DSRSD Project Update, February 1996.

<sup>44</sup> Growth Management Report, 1996, City of Pleasanton, Table V.d-5, p. V.d-13.

amendments being considered by several Tri-Valley communities are adopted, then the prospective general plan-based buildout would require a water supply of approximately 64,400 acre-feet<sup>45</sup>.

To meet anticipated future water requirements, Zone 7 is actively seeking new sources of water supply. Zone 7's *Water Supply Planning Report*, January 1994, identifies the following potential water sources:

<u>Potential Zone 7 Water Sources</u>	<u>Potential Yield (acre-feet per year)</u>
State Water Project (SWP) Improvements	8,400-10,400
Water Marketing	1,000-50,000
Recycled Water	1,000-21,000

Zone 7 is also seeking ways to offset possible long term reduction of State Water Project deliveries, which could result from long-term drought and/or environmental considerations including increasing in-stream flows and reducing withdrawals from surface waters in the Delta.

In addition to the overall supply, peak period demands must also be addressed. Zone 7 currently has sufficient capacity to treat its surface water supplies at two Zone 7 treatment plants: the Del Valle water treatment plant, with 36 million gallons per day capacity, and the Patterson Pass water treatment plant, with 11 million gallons per day. Zone 7 delivers water to Pleasanton via two pipelines: the Cross-Valley Pipeline and the new Vineyard Pipeline. Treated water is augmented during peak demand periods by groundwater from three well fields: Hopyard (8 million gallons per day), Mocho (5 million gallons per day), and Stoneridge (5 million gallons per day).

If best management practices and water conservation measures were applied to the entire Zone 7 service area, resulting in an average ten percent reduction in normal consumption, then the 40,900 acre-feet of current annual average supplies could meet the needs of approximately 192,000 people.<sup>46</sup> The existing general plans for the cities of Pleasanton, Livermore, and Dublin (within the Zone 7 service area) have a population potential of 188,000 people within the Zone 7 water service area. Thus, the total current Zone 7 supplies (with a ten percent conservation factor) exceed the total demand generated by the buildout of the general plans for Pleasanton, Livermore, and Dublin.

**(2) *Recycled Water.*** The DSRSD Wastewater Treatment Plant (WWTP) is located south of Stoneridge Drive and east of Interstate 680 (I-680), about two miles north of the study area. The WWTP currently produces treated wastewater that has received secondary treatment. Such wastewater is suitable for irrigation of restricted access areas outside of the Livermore-Amador Valley aquifer. A small amount of the treated wastewater produced is reclaimed to irrigate the landscaping at the Stoneridge/I-680 interchange (10 to 15 acre-feet per year). To be suitable for irrigation of areas with public access, the wastewater must receive tertiary treatment and additional disinfection.

To be usable in the study area, which is in the area above the Livermore-Amador Valley Aquifer, reclaimed wastewater would also have to meet the requirements of Regional Board Order No. 93-159. This most likely would involve demineralization (e.g., reverse osmosis) or other measures to offset the salt loading to the main basin.

<sup>45</sup> Recycling Study, page 2-4, Figure 2-1: Zone 7 Water Supply and Potential Demand.

<sup>46</sup> Recycling Study, page 2-4, Figure 2-1: Zone 7 Water Supply and Potential Demand.



Pleasanton has contractual rights to a prorated share of the WWTP treated wastewater. The prorating is based on the wastewater treatment capacity purchased by Pleasanton and the overall capacity of the WWTP. Theoretically, Pleasanton has rights to 7.135 million gallons per day of wastewater. The actual amount of reclaimed wastewater available, however, depends on total flows to the WWTP, the level of treatment required, and storage capacity. In the winter, the flows to the WWTP will be higher but demand for reclaimed wastewater will be lower; this imbalance can be offset to some extent by storage.

Given the anticipated irrigation demands for the property, Pleasanton could, in coordination with DSRSD or alone, provide tertiary treated or demineralized wastewater effluent for irrigation of the golf course and open space areas. Pleasanton's average dry weather wastewater flow is estimated at slightly over 5 million gallons per day, and reclaimed wastewater supplies available to the City with tertiary treatment could approach the upper limit of this amount.

If the wastewater must be demineralized by reverse osmosis, 10 to 20 percent of the water entering the reverse osmosis process would be output as brine. In this case, the amount of recycled water available to Pleasanton would be less than if tertiary treatment were used, but it would still far exceed the amount needed to irrigate the site.

According to DSRSD, the WWTP already has facilities for tertiary treatment (although the tertiary treatment facilities have been inactive for the past 15 years or so), the capability for additional disinfection, and room for reverse osmosis equipment. DSRSD is proceeding with plans to provide other communities with reclaimed wastewater and could serve Pleasanton with reclaimed wastewater when Pleasanton has a suitable distribution system and reliable demand. These plans, known as the "San Ramon Valley Recycled Water Project," propose distribution of recycled water to the Dublin and San Ramon Valley areas. The water would receive tertiary treatment, which would make it suitable for irrigation but not for direct human consumption, prior to distribution. A Final EIR (State Clearinghouse # 96013028) has been certified and a project has been approved.<sup>47</sup>

Recycled water for irrigation of lands in the specific plan area is expected to be either (a) a blend of demineralized and partial tertiary treated effluent, disinfected and filtered to achieve an acceptable total dissolved solids (TDS) content, (b) fully demineralized recycled water, or (c) tertiary treated wastewater with some provisions to mitigate increased salt loading to the main basin. Since 100 percent demineralized water can rapidly corrode concrete or steel pipes, high density polyethylene (HDPE) pipe or other suitable piping material would be used for the recycled water lines; this would provide greater flexibility for future operating conditions.

The distribution system would consist of a pump station at the WWTP, pipelines, and possibly a storage reservoir. Pipeline size could vary depending on whether the line is sized to serve only SFWD project irrigation demand or also other sites within the City. Pleasanton has made a preliminary identification of City park and streetscape areas that might be served by recycled water should a recycled water line be constructed to serve the SFWD site from the DSRSD plant. Four possible pipeline alignments have been identified:<sup>48</sup>

- Within either bank of the flood control channel that parallels I-680. (A more detailed description of this option is included on p. 91, in the "Characteristics of the Project" section of this part.)

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<sup>47</sup> This project is sponsored by a DERWA (the DSRSD/EBMUD Recycled Water Authority, a Joint Powers Authority).

<sup>48</sup> Memorandum, December 11, 1996, from Garry Lee, City of Pleasanton, to Mundie & Associates.

- Within the I-680 right-of-way, either the center median or the shoulder. This alignment would provide an opportunity for more freeway landscaping.
- Either of the first two alignments south to the Pleasanton Canal, then east to Hopyard Road, south along Hopyard Road to Valley Avenue, and then south along Valley Avenue to the SFWD site.
- Either of the first two alignments south to the Arroyo Mocho, then east along the Arroyo to Hopyard Road, south along Hopyard Road to Valley Avenue, and then south along Valley Avenue to the SFWD site.

The requirements for storage reservoirs and pumping stations will depend on the number, location, and type of irrigation sites. A distribution system must be capable of delivering the instantaneous peak demand at the required pressure to all customers. Parks, schools, landscape medians, etc. rely on the distribution system to provide that peak demand and pressure without any onsite storage or pumping. In contrast, most golf courses use water features for water storage with a high-capacity pump station onsite to deliver peak irrigation demand. Therefore, if only the golf course on the SFWD site is irrigated as described above, then the system may be as simple as a pump station at the treatment plant capable of delivering only the maximum day demand over a 24-hour period. The recycled water would be delivered to the golf course water feature and distributed to the onsite irrigation system. If the golf course design does not include the use of a water feature for storage, then a storage reservoir and high-capacity pump station at the treatment plant would be required.

If there are additional irrigation sites connected to the recycled water distribution system, then the system would need additional conventional storage and pumping facilities.

### **3. Impacts**

#### **a. Impacts of the Cooperative Plan and the Preferred Plan**

**(1) Impacts on Adequacy of Water Supply.** Table 16 compares average demand day and the peak demand day for potable water on the fully-developed project site to the demand allowed for in the Pleasanton Water Master Plan. The water demand estimates for the Cooperative Plan and the Preferred Plan presented in Table 16 assume use of groundwater or recycled water for irrigation of the golf course, except for the tees and greens, which require better-quality water than the fairways and other landscaped areas.

**Table 16**  
**Estimated Demand for Potable Water:**  
**Cooperative Plan and Preferred Plan\***

<b>Plan</b>	<b>Average Day (Million Gallons)</b>	<b>Peak Day (Million Gallons)</b>	<b>Year (Million Gallons)</b>	<b>Year (Acre-Feet)</b>
Pleasanton Water Master Plan	1.51	4.53	589.24	1,808
Cooperative Plan	1.00	3.01	365.82	1,123
Preferred Plan	1.04	3.11	377.96	1,160

\* Peak day assumes peaking factor of 3.0; annual use is 365 times average day (including golf course; this approach is the standard, and recognizes that irrigation typically occurs an average of 300 days rather than 365 days). Estimates for Pleasanton Water Master Plan assume that potable water is used for all golf course irrigation.

Source: Pleasanton General Plan, Pleasanton Water Master Plan and Greiner, Inc.



The figures in Table 16 indicate that development of the site consistent with either the Cooperative Plan or the Preferred Plan would demand less potable water than allowed for in the planning documents. The water demand from development permitted by either plan would, however, comprise a portion of the total water demand projected in the Water Master Plan, and would thus represent a contribution to cumulative impact of development on the demand for Zone 7 water supplies.

**Impact C1. Cumulative increase in demand for potable water.** Development of the site would contribute to the increasing demand on Zone 7 water supplies, although to a lesser extent than estimated in Pleasanton's Water Master Plan.

**(2) Impacts on the Adequacy of the City Water System.** Potential impacts on the water distribution system and the water storage system are discussed in turn.

**(a) Water Distribution System.** The existing Pleasanton water distribution system is designed to provide sufficient capacity to serve the project site. The water mains that are constructed as part of the project, in combination with the local (onsite) distribution network, will complete the distribution system for the site.

Development of the project site comprises a portion of the buildout of Pleasanton envisioned in the Water Master Plan, and will thus contribute to the cumulative demands on the water distribution system. Over time, growth in the maximum day demand will require system improvements. These improvements may include new pipelines or greater turnout capacities. The improvements in the study area that are planned under the Pleasanton Water Master Plan are also shown in Figure 15.

**Impact C2. Cumulative increase in demand for water distribution capacity.** Delivery of Pleasanton water will require implementation of planned improvements in the existing water distribution system in the vicinity of the site.

**(b) Water Storage Facilities.** As indicated in Table 15, Pleasanton currently has excess water storage capacity, and excess is expected to continue to be available through the year 2008. Development of the project will not use up this excess capacity; it will, however, contribute to the cumulative effect of reducing the excess. At some time in the future, additional capacity may be needed to assure that the City's water system meets its established pressure and fire fighting criteria.

**Impact C3. Cumulative increase in demand for water storage system capacity.**

**(3) Impacts on Groundwater.** The proposed project could affect the amount and quality of groundwater.

**(a) Amount.** As indicated in the Setting section of this water discussion, the safe groundwater yield of the Central subbasin is estimated at 12,800 acre-feet per year. Based on Zone 7 memoranda regarding groundwater pumping, it appears that groundwater withdrawals from the project site averaging 303 acre-feet per year were accounted for in the safe yield calculation.<sup>49</sup>

<sup>49</sup> Memoranda, April 13, 1994, from Todd N. Wendler, Water Resources Technician, to David W. Lunn, Chief, Water Resources Engineering, re: 1974-1993 Agricultural Groundwater Pumping; and March 9, 1994, from T. Wendler to D. Lunn re: 1974-1993 Municipal Pumpage.

If all or part of project groundwater use (for irrigation of non-greens areas of the golf course) – about 400 acre-feet per year – is determined to be part of the existing annual safe yield, then the impact of the project will be less than significant: such use would be simply a continuation of the agricultural use included by Zone 7 in its estimates of historical groundwater use within the annual safe yield. If, however, project use is determined to be in addition to the annual safe yield (i.e., an increase over the historical agricultural use of groundwater by valley groundwater users), then the impact would be cumulatively significant as a part of total regional demand.

**Impact C4.** (If all or part of groundwater withdrawals from the site, in combination with those of other groundwater users, are determined to be in addition to that of existing groundwater users, which equals annual safe yield:) Cumulative increase in groundwater withdrawal beyond the annual safe yield.

**(b) Quality.** Groundwater quality is acceptable for irrigation of non-greens areas of the golf course. Potable water, which has lower TDS, would be used for greens irrigation. (Demand for water to irrigate the tees greens is included in the water demand estimates in Tables 11, 12, and 16).

Groundwater degradation may occur on the site as a result of either disturbance of existing wells or percolation of chemicals.

The numerous abandoned wells on the site may not be properly sealed and destroyed, and could be disturbed during construction on the site. Construction activities may increase the chance that improperly abandoned wells will provide a pathway for pollutants near the surface to reach unpolluted aquifers. The pollutants could include chemicals, fertilizers and herbicides used on the golf course and other irrigated, landscaped areas.

Groundwater contamination could also occur as a result of excessive application of fertilizers, herbicides and other chemicals on the golf course and other irrigated, landscaped areas and their subsequent percolation into the aquifer. Although the potential for these chemicals to enter the aquifer is considered low because of the aquifer's depth, they could be carried by surface runoff into drainage channels, the Arroyo, and ultimately to downstream groundwater basins if rain falls in substantial amounts soon after their application. (See the discussion of recycled water pipeline impacts, below, and Chapter 5, Part B (Drainage) for discussion of runoff issues.)

If use of recycled water is feasible, and if a recycled water pipeline is constructed allowing application of recycled water for irrigation of the golf course and other open space areas, groundwater protection would be assured by a combination of (1) meeting standards for recycled water set forth in the Basin Plan, (2) adherence to the requirements of Regional Board Order No. 93-159 (probably involving some sort of demineralization, such as reverse osmosis), (3) compliance with the specifications resulting from the Zone 7 salt management study, when completed, and (4) on-going quality control on the part of the WWTP operator. Under these conditions, use of recycled water to irrigate the golf course and open space areas would have no adverse impact on groundwater quality.

**Impact C5.** Possible groundwater degradation through disturbance of existing wells or percolation.

**(4) Impacts Related to a Recycled Water Pipeline.** The project includes possible construction of a recycled water pipeline from the DSRSD Wastewater Treatment Plant to the project site, to allow for



future use of recycled water for irrigation of portions of the golf course and, possibly, other landscaped public areas. The scale and location of the recycled water line described above may affect environmental resources.

**(a) Construction Period Impacts.** Principal activities associated with this construction would be trenching and laying of pipe. Temporary, short-term traffic associated with construction activities, as well as disruption of normal traffic, could occur. This issue is addressed in Chapter 5, Part J (Transportation and Circulation). Measures would be required to minimize construction-related dust and/ or erosion, depending on the time of year.

Environmental resources potentially affected would be cultural resources and biological resources, if such resources are identified along the route. Pleasanton would conduct its own CEQA review of any pipeline project and would be responsible for addressing these potential impacts off the SFWD site. On the site, the possibility that excavation for the pipeline could affect cultural resources is addressed in Chapter 5, Part M (Cultural Resources) and the possibility of an impact on biological resources is addressed in Chapter 5, Part O (Biology).

<b>Impact C6. Construction impacts associated with provision of a recycled water pipeline.</b>
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**(b) Operation Period Impacts.** No impacts are found with respect to noise (minor pump station noise at the WWTP would be indistinguishable from the general noise at that facility), visual resources (for the most part the pipeline would not be visible), or risk of upset (in the event of rupture, the possibility of contamination would not arise in view of the high level of treatment planned).

The project is not dependent on recycled water for irrigation of the golf course and other landscaped public areas as long as Pleasanton can assure an adequate supply of potable water from the City's resources or can pump groundwater of sufficient amount to irrigate the golf course, parks, public landscaped areas, etc. One of the purposes of recycled water use is to relieve the potable water supply of demand that might otherwise be placed on it. Project use of recycled water would not have an adverse impact on water resources.

As noted above, it is possible that recycled water that is applied to the golf course and other public landscaped areas could be carried by surface runoff into drainage channels, the Arroyo, and beyond (e.g., Alameda Creek and the Alameda County Water District recharge pits of the Niles-Cone basin) if rain falls in substantial amounts soon after its application.

<b>Impact C7. Potential downstream impacts on water quality if recycled water is used for irrigation of the golf course and landscaped public areas.</b>
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**b. Impacts of Alternative 2**

**(1) Impacts on Adequacy of Water Supply.** Pleasanton would supply water through an extension of its existing water system to meet the potable water demands. Alternative 2 is estimated at 1.03 mgd, which is less than that assumed in the Water Master Plan (1.51 mgd) and also less than that estimated for the Cooperative and Preferred Plans (1.00 and 1.01 mgd respectively; see Table 16). This estimate, summarized in Table 17, is derived through a series of adjustments to the calculations for the Cooperative Plan: golf course water demand has been taken out, and a high water use is shown for community and open space

areas (of which Alternative 2 would have a greater acreage). However, no water demand has been assumed for the lake features, so the total demand may be understated.

**Table 17**  
**Average Day Potable Water Use: Alternative 2**

Land Use (Measurement Units)	Amount of New Development	Demand in GPD (gallons per day) per Measurement Unit	Total Gallons per Day
<b>Alternative 2 (No Golf Course)</b>			
Medium Density Residential (Units)	1,520	440	668,800
High Density Residential (Units)	380	331	125,780
Commercial/Office/Retail (Sq. Ft.)	577,000	0.2	115,400
Community Facilities, Area (Acres)	4	1,080	4,320
Schools (Acres)	11	1,400	15,400
Parks (Acres)	46.5	2,230	103,695
<b>Total</b>			<b>1.03 mgd</b>

**Note:** Water use factors are taken from Pleasanton General Plan and/or Pleasanton Water Master Plan. No water use factor has been assigned to the "lake" features; any water needed for this purpose is assumed to be groundwater or recycled water.

**Source:** Land use assumptions are taken from Table 4. Residential units allocated to single-family and multi-family as per Pleasanton staff.

Alternative 2 would, therefore, have a less-than-significant project-level impact on the Pleasanton water supply, but would – like the Cooperative Plan and Preferred Plan – contribute to the cumulative demand for additional water supply.

**Impact C1. Cumulative increase in demand for potable water.**

Same as for the Cooperative Plan and the Preferred Plan.

**(2) Impacts on the Adequacy of the City Water System.** Like the Cooperative and Preferred Plans, the impacts of development accommodated by Alternative 2 on the City's water distribution system and water storage system would be less-than-significant at the project level, but would contribute to the cumulative impact on the need for future distribution and storage improvements.

**Impact C2. Cumulative increase in demand for water distribution capacity.**

Same as for the Cooperative Plan and the Preferred Plan.

**Impact C3. Cumulative increase in demand for water storage system capacity.**

Same as for the Cooperative Plan and the Preferred Plan.



**(3) Impacts on Groundwater.** Groundwater degradation may occur on the site as a result of either disturbance of existing wells or percolation of chemicals. This is the same impact noted for the Cooperative Plan and the Preferred Plan.

In this “no golf course” alternative, groundwater could be used in the lakes. Such a use has similar impacts to use for golf course irrigation (Cooperative Plan and Preferred Plan) as it relates to annual safe yield, but the amount of water needed for this purpose would be less than the amount needed for a golf course.

<b>Impact C4.</b>	<b>(If all or part of groundwater withdrawals from the site are determined to be in addition to that of existing groundwater users, which equals annual safe yield:) Increase in groundwater withdrawal beyond the annual safe yield.</b>  Same as for the Cooperative Plan and the Preferred Plan.
<b>Impact C5.</b>	<b>Possible groundwater degradation through disturbance of existing wells or percolation.</b>  Same as for the Cooperative Plan and the Preferred Plan.

**(4) Construction of Recycled Water Pipeline.** If Alternative 2 were to be planned and designed to use recycled water, the type of line that would be needed under the Cooperative Plan would be required for this plan. Construction impacts would be anticipated.

<b>Impact C6.</b>	<b>Construction impacts associated with provision of a recycled water pipeline.</b>  Same as for the Cooperative Plan and the Preferred Plan.
<b>Impact C7.</b>	<b>Potential downstream impacts on water quality if recycled water is used for irrigation of the golf course and landscaped public areas.</b>  Same as for the Cooperative Plan and the Preferred Plan.

### **c. Impacts of Alternative 3**

Under Alternative 3, the site would be developed under an Alameda county specific plan, rather than in the City of Pleasanton. The impacts of development under that arrangement are addressed in the County EIR, Chapters 4.3 and 4.17.

## **4. Mitigation Measures**

**Impact C1.** Cumulative increase in demand for potable water.

### **Measure C1a. Require payment of regional and City connection fees.**

Require that all new development pay applicable water system connection fees that are charged by the City of Pleasanton and Zone 7 to finance any needed improvements, consistent with existing law. The City of Pleasanton will use its best efforts to ensure that DSRSD credit project connection fees to DSRSD against the costs of the recycled water transmission line.

**Measure C1b. Require water conservation measures.**

Require that the specific plan and subsequent development plans for the property include strategies and actions for water conservation and recycling.

Pleasanton General Plan Water Programs 4.2 4.5, 4.6, and 4.9 shall be implemented as part of the specific plan. These programs call respectively for contingency planning for water shortages, installation of water conservation devices and drought-tolerant landscaping, utilization of water reclamation methods to the fullest extent feasible, and education of citizens regarding conservation of water in the home and in landscaping.

**Measure C1c. Design golf course to minimize potable water use.**

Use turf species and other materials that are relatively less demanding of water.

**Measure C1d. Design golf course to accept recycled water.**

Planting materials that can tolerate the TDS and other water quality characteristics of recycled water that would be available to the project should be chosen for the non-greens areas of the golf course. Tees and greens, which require better-quality (less salty) water, should use potable water to maintain plant health and attractiveness. (Use of recycled water blended with groundwater may be an acceptable alternative to potable water for tees and greens.)

**Measure C1e. Use recycled water for golf course irrigation.**

Require that the specific plan and any development plans for the site incorporate the use of suitably-treated reclaimed water, when technically and economically feasible, for irrigation of the golf course (except the tees and greens) and other public spaces, in accordance with Regional Board Order No. 93-159, if consistent with the recommendations that emerge from the salt management plan.

The irrigation transmission pipeline and irrigation system should be constructed completely separate from the potable water system, and these facilities should be marked to make the non-potable nature of the system obvious.

**Measure C1f. Investigate use of groundwater for irrigation of landscaped areas and parks/public areas.**

Design these areas (e.g., through selection of plant materials and routing of recycled water lines) to be able to use recycled water as well.

**Measure C1g. During the design phase of the recycled water project, investigate potential for recycled water line to serve additional sites, including Castlewood, fairgrounds, I-680 ROW, parks, and other landscaped public areas, and size the pipeline accordingly.**

Delivery of recycled water to the identified areas would reduce the regional demand for potable water.

Implementation of Measures C1a through C1f would reduce Impact C1 to a less-than-significant level.



**Impact C2.** Cumulative increase in demand for water distribution capacity.

**Measure C2a.** Require payment of regional and City connection fees.

Same as Measure C1a.

**Measure C2b.** Require water conservation measures.

Same as Measure C1b.

**Measure C2c.** Require construction of improvements to the Pleasanton water system to meet City standards.

When development of the site occurs, require that improvements to the Pleasanton water system that are incorporated in the project be constructed in accordance with Pleasanton's Water Master Plan as shown in Figure 15, or its functional equivalent.

Implementation of Measures C2a through C2c would reduce Impact C2 to a less-than-significant level.

**Impact C3.** Cumulative increase in demand for water storage system capacity.

**Measure C3a.** Require payment of connection fees. Same as Measures C1a and C2b.

**Measure C3b.** Require water conservation measures.

Same as Measures C1a and C2a.

**Measure C3c.** Use recycled water for golf course irrigation. Same as Measure C1e.

Implementation of Measures C3a through C3c would reduce Impact C3 to a less-than-significant level.

**Impact C4.** (If all or part of groundwater withdrawals from the site are determined to be in addition to that of existing groundwater users, which equals annual safe yield:) Increase in groundwater withdrawal beyond the annual safe yield.

**Measure C4a.** Pay Zone 7 fees to compensate for over-withdrawal of groundwater.

"Over-withdrawal" would be any amount in excess of the amount allocated to the SFWD site in the safe yield calculation (estimated at 303 acre-feet per year based on the April 13, 1994 Zone 7 memorandum).

**Measure C4b.** Design golf course to minimize water use unless recycled water source is available.

Same as Measure C1c.

**Measure C4c.** Design golf course to accept recycled water.

Same as Measure C1d.

**Measure C4d.** Use recycled water for golf course irrigation.

Same as Measure C1e.

Implementation of Measures C4a and C4b would reduce Impact C4 to a less-than-significant level; implementation of Measure C4d (which also requires Measure C4c) would eliminate this impact.

**Impact C5.** Possible groundwater degradation through disturbance of existing wells or percolation.

**Measure C5a. Identify and remedy conditions at abandoned wells, if necessary.**

Conduct a search for all existing wells and confirm status of abandonment. If abandonment does not meet current standards, seal and destroy wells in accordance with current standards.

**Measure C5b. Prepare a Golf Course Management Plan.**

Prior to issuance of a grading permit, require the preparation of a Golf Course Management Plan that includes standards for the use and storage of fertilizers, herbicides, and other chemicals.

Implementation of Measures C5a and C5b would reduce Impact C5 to a less-than-significant level.

**Impact C6.** Construction impacts associated with provision of a recycled water pipeline.

**Measure C6a. Implement Pleasanton's standard construction mitigation measures.**

**Measure C6b. Upon completion of subsequent environmental review for offsite segments of the recycled water line, adopt and implement specific mitigation measures.**

Implementation of Measure C6 would reduce Impact C6 to a less-than-significant level.

**Impact C7.** Potential downstream impacts on water quality if recycled water is used for irrigation of the golf course and landscaped public areas.

**Measure C7. Prepare a Golf Course Management Plan.**

Same as Measure C5b. Include downstream water users, including the Alameda County Water District, in the development of the Management Plan in order to assure no adverse impact on downstream water supplies.

Implementation of Measure C7 would reduce Impact C7 to a less-than-significant level.



## **5. Summary Comparison of Impacts and Mitigated Impacts: Water**

	<b>Cooperative Plan</b>	<b>Preferred Plan (Alternative 1)</b>
<b>Impact C1.</b> Cumulative increase in demand for potable water.	S(C)/LS	S(C)/LS
<b>Impact C2.</b> Cumulative increase in demand for water distribution capacity.	S(C)/LS	S(C)/LS
<b>Impact C3.</b> Cumulative increase in demand for water storage system capacity.	S(C)/LS	S(C)/LS
<b>Impact C4.</b> (If all or part of groundwater withdrawals from the site are determined to be in addition to that of existing groundwater users, which equals annual safe yield:) Increase in groundwater withdrawal beyond the annual safe yield.	S(C)/LS	S(C)/LS
<b>Impact C5.</b> Possible groundwater degradation through disturbance of existing wells or percolation.	S/LS	S/LS
<b>Impact C6.</b> Construction impacts associated with provision of a recycled water pipeline.	S/LS	S/LS
<b>Impact C7.</b> Potential downstream impacts on water quality if recycled water is used for irrigation of the golf course and landscaped public areas.	S/LS	S/LS

Key: \*/\*: significance before mitigation/significance after mitigation.  
 S: significant (C): contributes to cumulative impact  
 LS: less than significant n.a.: impact does not apply to this alternative  
 \* no mitigation required ND: not determinable  
 † Less than significant before mitigation, but contributes to cumulatively significant impact.  
 NM: no mitigation possible (beyond policies, programs, and other regulations already in place).

## D. INFRASTRUCTURE SYSTEMS: WASTEWATER

### 1. Setting

Until 1980, a portion of the site was used by the City of Pleasanton for wastewater treatment: several drying ponds for biosolids and two ponds to hold wet weather overflows were located in the southern part of the study area. In addition, about one-third of the site was irrigated with reclaimed wastewater until 1980.

Today, wastewater collection, treatment and disposal for development in the vicinity of the study area is provided by an array of public agencies. The City of Pleasanton collects sewage and transports it to a treatment plant that is owned and operated by the Dublin-San Ramon Services District. DSRSD then transports the treated effluent to a pipeline operated by the Livermore-Amador Valley Wastewater Management Authority (LAVWMA). LAVWMA, in turn, transports the treated effluent to the East Bay Dischargers Authority (EBDA), where it is combined with effluent from the other members of the authority, dechlorinated, and discharged through a common outfall into San Francisco Bay. These agencies, the services they provide, and their capacities to respond to additional demand are described below.

#### a. Wastewater Collection: City of Pleasanton Sewage System

**(1) Existing Infrastructure System and Capacity.** Several sewer lines, sewage lift stations and force mains exist in the vicinity of the project site. The existing sewer facilities are part of the City of Pleasanton sewage collection system. Figure 17 shows the major existing sewer facilities. The improvements that are currently planned under the Pleasanton Wastewater Master Plan are also shown in Figure 17. The City Hall Pump Station (S-7), located at the northeast corner of the study area, discharges into the 18-inch line flowing west along Bernal Avenue. The existing 18-inch diameter gravity sewer main along Bernal Avenue increases to a 27-inch diameter gravity sewer main en route to I-680, where it turns north to the Bernal I-680 pump station (S-8). On the west side of the study area, a 15-inch diameter gravity sewer flows north to the San Francisco Pump Station (S-5). The San Francisco Pump Station then pumps through a 10-inch force main into an 18-inch diameter gravity sewer main, which continues northward to Bernal Avenue. From there, the 18-inch line flows east to I-680, and then north along I-680, where it increases to a 21-inch diameter gravity sewer.

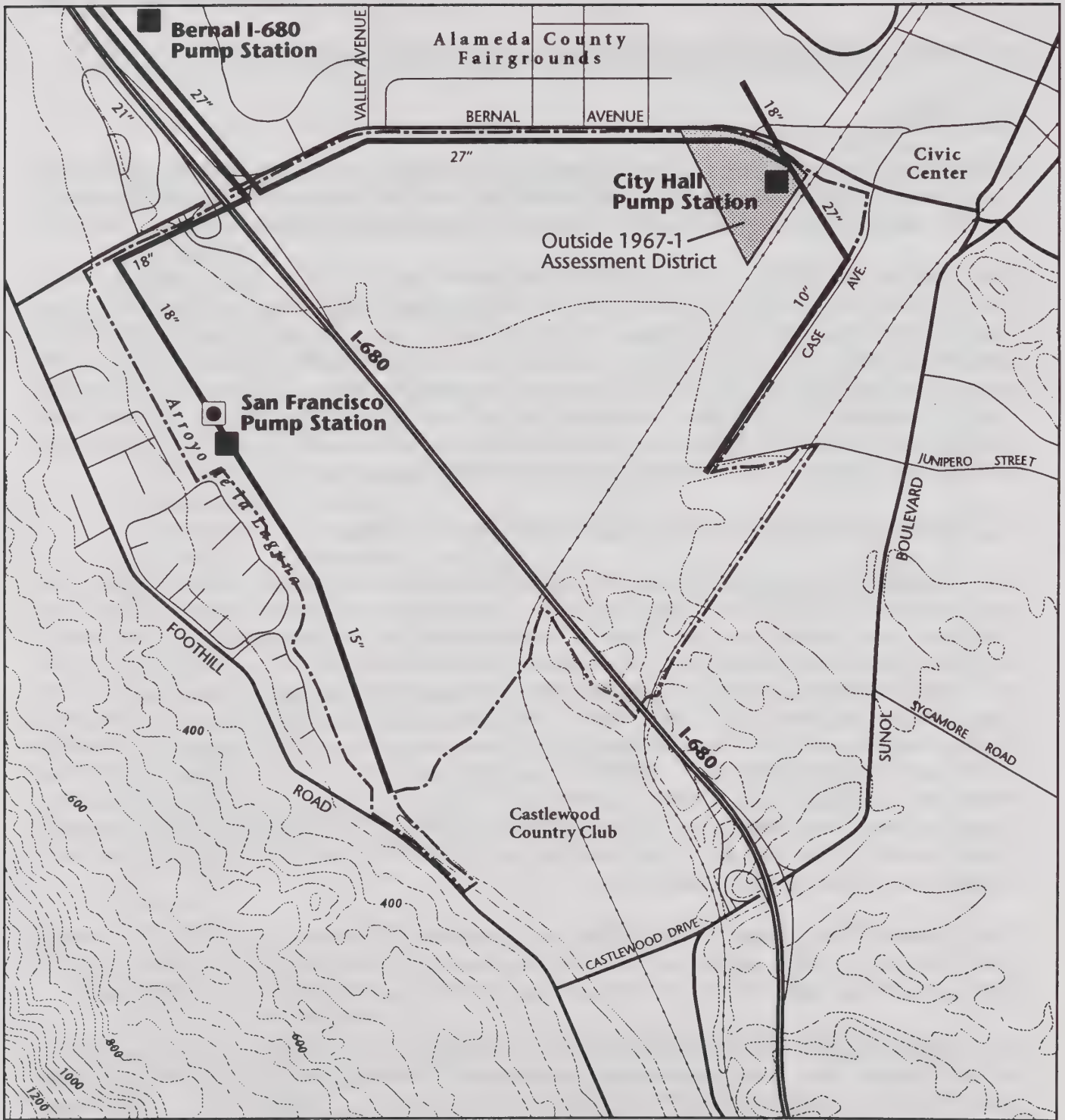
The *Pleasanton Sewer Master Plan* of 1985-86 identified excess pipeline capacity for average dry weather flow of at least 1.2 million gallons per day. The excess capacity is now certainly less, but it is not clear just how much less. Staff indicate that sufficient capacity for the proposed project is currently available.

**(2) Demand from the Project Site Accommodated by Existing Infrastructure and Master Plan.** In its 1996 General Plan, Pleasanton anticipated development of the study area at a level of development greater than the amount permitted by either the Cooperative Plan or the Preferred Plan.<sup>50</sup> The estimated average dry weather flow Average Dry Weather Flow (ADWF) for the study area, using the anticipated development under the Pleasanton General Plan and the flow coefficients given in the *Pleasanton Sewer Master Plan*, is 0.58 million gallons per day.




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<sup>50</sup> The assumed level of development was carried forward from the 1986 General Plan, because the specific plan was being prepared during the time the 1996 General Plan was being prepared.





Source: City of Pleasanton

-  Diversion Structure
-  Pump Station
-  Existing line

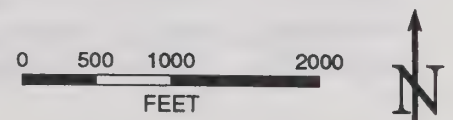


Figure 17  
Existing Sewer Facilities

**(3) Provision of Sewer Infrastructure for Development on the SFWD Site.** It is Pleasanton's policy to phase construction of permanent City sewer improvements as a condition of new development to maintain City service standards. Consistent with this policy, new development is required to pay its fair share of the City's planned sewer system improvements including treatment, distribution, reuse, and export facilities (General Plan, Public Facilities Element, Policies 1 and 2). In practice, fees charged for connection to the sewage system are used for improvements to the collection system, as needed, to assure that sufficient pipeline capacity is available to serve development within the City.

According to a "Preliminary Site Analysis" prepared by Ted Fairfield for the City of San Francisco and transmitted to Gale, Seibel & Inderbritzen Attorneys at Law on July 11, 1986, the majority of the study area was included in the West Pleasanton Sewer Assessment District #1967-1. This assessment district provided for the construction of a skeletal sewer main system (interceptor and pump station) to serve the west side of Pleasanton, but did not provide for any sewage treatment. SFWD participated in the assessment district.

The assessment district anticipated an ADWF of at least 0.84 million gallons per day from the study area. This amount is substantially greater than the ADWF that would be produced by development permitted by either the Cooperative Plan or the Preferred Plan.

**b. Wastewater Treatment: Dublin-San Ramon Services District Facilities and Services**

The Pleasanton collection system carries sewage to the Dublin-San Ramon Services District (DSRSD) Wastewater Treatment Plant (WWTP) south of Stoneridge Drive and east of Interstate 680. This plant provides secondary treatment of wastewater for the cities of Pleasanton, portions of San Ramon, and Dublin; the Castlewood Country Club; and the Santa Rita Jail and Federal Prison Facilities.

The City of Pleasanton has an agreement with DSRSD (November 3, 1993) entitling Pleasanton to treatment of 7.135 million gallons per day of ADWF. In 1995, Pleasanton produced an ADWF of 5.25 million gallons per day. This volume is expected to grow to 5.8 million gallons per day in 1998. DSRSD is currently preparing a treatment plant master plan which will address the need for additional treatment capacity in the future. The agreement also commits DSRSD to expand treatment capacity to serve Pleasanton on an as-needed basis.

**c. Wastewater Export: Livermore-Amador Valley Wastewater Management Authority**

Treated wastewater from the WWTP is pumped to an equalization and storage facility before being exported from the Tri-Valley to the San Francisco Bay via a pipeline paralleling Interstate 580. The equalization and storage facility and the export pumps and pipeline are owned and operated by the Livermore-Amador Valley Wastewater Management Authority (LAVWMA), of which Pleasanton is a member.

After treatment at the DSRSD and Livermore plants, treated effluent is transported to the East Bay Dischargers Authority (EBDA) interceptor facilities in San Leandro. This effluent is then combined with treated effluent from four member agencies of EBDA, dechlorinated, and discharged through a common outfall to central San Francisco Bay, west of the Oakland Airport, approximately 30,000 feet from shore in about 23 feet of water.<sup>51</sup>

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<sup>51</sup> Brown and Caldwell, May 1992, page 2-13.



Pleasanton is entitled to an export capacity of 7.503 million gallons per day measured as Average Day Maximum Month (ADMM) wastewater flow, a capacity designed to accommodate demand during wet weather periods. The City's estimated present capacity in terms of ADWF is approximately 6.603 mgd.<sup>52</sup>; the balance is capacity necessary for handling increased flows during wet weather, caused by infiltration/inflow.

#### **d. Treatment and Export Capacity Relationships**

Pleasanton has made commitments to provide sewage capacity (transport, treatment and export) to various pending developments. These commitments total 1.44 million gallons per day (ADWF). Of this total, approximately 1.20 million gallons per day have been committed by Pleasanton in a legally binding fashion; the remaining 0.24 million gallons per day are reserved for future developments, but no legally binding agreements between the owners and Pleasanton have been reached. The non-legally-binding reserves are "set aside" for residential projects that have Growth Management Plan approval or exemption and for approved commercial/office/industrial projects, but do not become legally binding until the specific projects have paid sewer connection fees (typically at the time a building permit is issued). These approvals have no legal priority over other projects, and the capacity may theoretically be assigned to projects on a first-come, first-served basis.

The City's commitments of sewage capacity are summarized and compared to DSRSD treatment capacity and LAVWMA export capacity in Table 18. Committed capacity will not be "demanded" in the short term. Commitments include residential development with no growth management approval to build until after 2000 and commercial/office/industrial development for unapproved projects totaling many years of absorption by the Pleasanton market. City staff estimate that all of the "committed" capacity will not be utilized (i.e., flowing) until 2005 or later.

The figures in the table make clear the following relationships:

- Dry weather flow capacity available to Pleasanton at the LAVWMA equalization, storage, and export facility (6.603 mgd during winter) is less than capacity available at the DSRSD wastewater treatment plant (7.135 mgd).
- The 1995 ADWF plus the legally binding commitments total 6.45 million gallons per day and the 1995 ADWF plus all the commitments is 6.69 million gallons per day.
- Pleasanton has 0.685 million gallons per day of remaining capacity at the DSRSD treatment plant after demand from existing flows and legal reserves, and 0.445 million gallons per day of capacity after non-legal commitments are added to this demand.
- Pleasanton has 0.153 mgd million gallons per day of remaining capacity at LAVWMA after demand from existing flows and legal reserves. When demand from non-legal commitments is counted, the City's LAVWMA capacity is exceeded by 0.087 million gallons per day.

LAVWMA is actively attempting to provide a larger export capacity to all of its subscribers. The Pleasanton City Council has expressed support of LAVWMA efforts to expand capacity and of negotiations with the East Bay Dischargers Authority (EBDA) for increased export capacity. In addition, the 1996 Pleasanton General Plan calls on the City to cooperate with neighboring jurisdictions to evaluate alternatives for sewage treatment and export capacity expansion (Subregional Planning Element, Program 2.7). It is considered unlikely that all the potential development accounted for in the various City legal and nonlegal reserves will seek building permits before more export capacity is obtained.

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<sup>52</sup> 1996 Growth Management Report Update, City of Pleasanton, page V.e-4.

**Table 18**  
**Wastewater Treatment Capacity Demand and Supply Relationships**  
**(mgd)**

	Demand	Supply: DSRSD (Treatment Capacity)	Supply: LAVWMA (Export Capacity)
Total Capacity, ADWF		7.135	6.603 **
Existing ADWF (1995)	5.25 *	-5.250	-5.250
<i>Remaining Capacity After Existing ADWF</i>		<i>1.885</i>	<i>1.353</i>
Pending Development with Legal Commitments	+1.20	-1.200	-1.200
<i>Total Demand After Pending Legal Commitments</i>	<i>6.45</i>		
<i>Remaining Capacity After Pending Legal Commitments</i>		<i>0.685</i>	<i>0.153</i>
Plus/Minus Pending Developments without Legal Commitments	+0.24	-0.240	-0.240
<i>Total Demand After Pending Non-legal Commitments</i>	<i>6.69</i>		
<i>Remaining Capacity After Pending Non-legal Commitments</i>		<i>0.445</i>	<i>-0.087</i>

\* 1995 ADWF; estimated ADMM was 6.99 mgd.

\*\* Total Average Day Maximum Month of 7.503 mgd, reduced by 0.9 mgd to account for infiltration/inflow, is an estimate of average dry weather flow equivalent of the export system.

Sources: All information from City of Pleasanton, 1996 Growth Management Report, Chapter V.e, V.e-1 through V.e-4. City capacity at DSRSD provided by Steve Cusenza, City of Pleasanton (corrects erroneous figure in the Growth Management Report).

Plans for new, expanded export capacities in place have been delayed beyond 1996 by complex negotiations between LAVWMA and EBDA as well as differences of opinion among the LAVWMA jurisdictions. There is no certainty that resolution of these differences or expansion of capacity can be achieved. Regardless of the outcome of the LAVWMA process, however, the City of Pleasanton remains committed to securing sufficient treatment and disposal capacity to accommodate all growth anticipated in the General Plan.

#### **e. Potential for Production of Recycled Wastewater That Could Be Used on the Site**

Use of recycled wastewater on the project site (e.g., for golf course irrigation and other selected water demands) could reduce the demand for wastewater export capacity during months when irrigation is necessary. Very little recycled water is needed for irrigation in the winter, however, when the wastewater flows are the greatest (as a result of infiltration and inflow). To achieve a significant reduction in the required export capacity through the use of recycled wastewater, therefore, it would be necessary to build large storage facilities or treat recycled water to appropriate standards as determined by the State DOHS, the RWQCB and Zone 7, such that it can be injected back into the groundwater.



DSRSD's facilities and capacity for production of recycled wastewater that could be used on the site are discussed on p. 99 of this report ("Sufficiency of Water Resources," "Recycled Water"). Note that Zone 7 is currently developing a Salt Management Plan for the groundwater aquifer. It is not known how this plan may affect any use of recycled wastewater in the study area.

## 2. Impacts

### a. Impacts of the Cooperative Plan and the Preferred Plan

Table 19 calculates the total wastewater generation estimated for the Cooperative Plan and the Preferred Plan. Both the Cooperative Plan and the Preferred Plan would generate less wastewater than the amount of wastewater anticipated in the two earlier planning documents.

**Table 19**  
**Estimated ADWF Wastewater Generation: Cooperative Plan and Preferred Plan**

Land Use (Units of Measurement)		Amount of New Development	Generation Factor per Unit/Sq. Ft./Acre (Gallons per Day)	Total Flow (Gallons Per Day)
<b>Cooperative Plan</b>				
Single Family Residential	(Units)	1,520	220	334,400
Multiple Family Residential	(Units)	380	145	55,100
Commercial/Office	(Sq. Ft.)	577,000	0.15	86,550
Community Facilities (Public)**	(Acres)	18	2,000	36,000
Golf Clubhouse	(Sq. Ft.)	20,000	0.02	300
Schools***	(Acres)	5	2,000	10,000
Total				522,350
<b>Preferred Plan</b>				
Single Family Residential	(Units)	1,520	220	334,400
Multiple Family Residential	(Units)	380	145	55,100
Commercial/Office *	(Sq. Ft.)	587,000	0.15	88,050
Community Facilities (Public)**	(Acres)	14.3	2,000	28,600
Golf Clubhouse	(Sq. Ft.)	40,000	0.02	600
Schools***	(Acres)	10	2,000	20,000
Total				526,750

\* Includes allowance for 10,000 square feet on the West Parcel.

\*\* For worst-case scenario, assumes City acquisition of "Civic" area added to community park and its development as community facilities, not playfields.

\*\*\* Although the school is shown as a 5-acre site in the Cooperative Plan, it is paired with a 5-acre park. The wastewater projection assumes a typical 650-student elementary school in both plans.

Source: Mundie & Associates

Pleasanton would collect the wastewater generated through an extension of its existing system. No offsite expansion of the collection system is necessary. Treatment and export would be handled in the same manner as for other wastewater collected by Pleasanton. Because the increase in wastewater flows would be within the projection of the Pleasanton Sewer Master Plan, the required capacity improvements – expansion of export capacities and expansion of treatment capacities – are being planned and budgeted.

Although the expected wastewater generation is less than the amount of wastewater anticipated in the Pleasanton Sewer Master Plan, it is greater than the existing flow from the site (which is zero). Potential impacts resulting from the increase in wastewater flows involve (1) the adequacy of the wastewater collection system, (2) the adequacy of treatment capacity, and (3) the adequacy of export capacity.

**(1) Adequacy of Collection System.** Wastewater generated would not exceed that provided for by the Pleasanton Sewer Master Plan. Collection system improvements in place and illustrated in Figure 17 are expected to be adequate to handle these flows. Together with other development permitted by the Pleasanton General Plan, buildout of the project will add to existing flows, but will not exceed the capacity of sewer mains serving the site. Thus, there is no impact on the collection system.

**(2) Interference with Existing Sewer Main and Pump Station.** The existing sewer main and pump station located within the project boundary along the Arroyo de la Laguna may be in the way of channel setback, golf course construction (including bypass channel), and residential development. This main carries Castlewood and other southwest Pleasanton-generated sewage flows. It is likely that this main and pump station will need to be relocated to a site more compatible with project development.

<b>Impact D1.</b>	<b>Potential interference with existing onsite sewer main during construction.</b> Relocation and abandonment of the present facilities could cause disruption of existing flows and/or public health hazards due to inappropriate handling of abandoned lines.
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**(3) Adequacy of Treatment Facilities.** The additional flows generated by the project site could contribute to a possible future shortfall of treatment capacity at the DSRSD wastewater treatment plant.

According to Table 18, Pleasanton currently has 0.685 mgd of treatment capacity available at the DSRSD plant after existing flows and legally committed reserves. Wastewater generated by development permitted by the Cooperative Plan would reduce remaining capacity to about 0.153 mgd, while wastewater generated by development permitted by the Preferred Plan would reduce remaining capacity to about 0.158 mgd.

When non-legally committed reserved are included, Pleasanton has 0.445 mgd of remaining treatment capacity available. Development permitted by the Cooperative Plan would generate wastewater in an amount that exceeds this remaining capacity by 0.087 mgd, while development permitted by the Preferred Plan would generate wastewater that exceeds this capacity by 0.082 mgd.

The impact of increased wastewater flows on the capacity of treatment facilities is not considered a significant project-level impact. DSRSD is currently working on plans to expand the capacity of the WWTP to meet Pleasanton's needs (per the agreement dated November 1993). Because Pleasanton charges a sewer connection fee for all development to finance any needed improvements, funding should be available to pay for plant expansions when they are required.



The increase in wastewater flows generated by the project is, however, considered to be a cumulative impact on the adequacy of wastewater treatment facilities. Together with other development permitted by the Pleasanton General Plan, buildout of the project will use up or exceed existing treatment capacity.

**Impact D2.** Cumulative increase in demand for treatment capacity. Increase in wastewater flows generated by the project site, in conjunction with wastewater flows generated by other Pleasanton projects, could contribute to a possible future shortfall of treatment capacity at the WWTP.

If DSRSD is successful in expanding its treatment capacity, then the project-level impact will be less than significant.

Any potential for growth inducement as a result of DSRSD plant expansion would be an impact of that expansion project, and not an impact of development on the SFWD site. Such an impact would have to be addressed in the environmental analysis of the DSRSD project.

**(4) Adequacy of Export Capabilities.** The additional wastewater flows generated by the project site could contribute to an impending shortfall of export capacity at the LAVWMA facilities. Capacity available to the City of Pleasanton exceeds current flows and legally reserved flows, but pending developments that do not have legal commitments could generate additional flows that exceed the remaining capacity (see Table 18).

Projected wastewater generated by development under the Cooperative Plan (0.522 mgd, as shown in Table 19), in combination with existing flows and legal reserves, would create a shortfall of approximately 0.369 mgd. Wastewater generated by development permitted by the Preferred Plan (0.527 mgd, also shown in Table 19), in combination with existing flows and legal reserves, would create a shortfall of approximately 0.374 mgd. If all projects for which non-legally encumbered reserves have been identified were to be developed, then the shortfall would increase to 0.609 mgd and 0.614 mgd, respectively.

**Impact D3.** Increase in demand for export capacity (project impact and cumulative impact). Increase in wastewater flows generated by the project site will contribute to an impending shortfall of Pleasanton's export capacity at the LAVWMA facilities.

If LAVWMA is successful in expanding its export capacity, then the project-level impact will be less than significant.

## **b. Impacts of Alternative 2**

Alternative 2 would have generally the same impacts on wastewater generation and facilities as the Cooperative Plan and the Preferred Plan. Table 20, which summarizes the estimates of wastewater for this alternative, indicates that total generation in this alternative would be approximately the same as in the Preferred Plan. Wastewater generated by development of the site, when added to existing flows and legal reserves, would result in a deficit of capacity for the City of Pleasanton at the LAVWMA facility of 0.375 mgd; when non-legally committed reserves are added as well, the deficit would be 0.615 mgd. At the DSRSD treatment plan, capacity would exceed demand by 0.157 mgd when non-legally committed reserves are excluded and demand would exceed capacity by 0.083 mgd when they are included.

**Table 20**  
**Estimated ADWF Wastewater Generation: Alternative 2**

<b>Land Use</b> <b>(Units of Measurement)</b>	<b>Amount of New Development</b>	<b>Generation Factor per Unit/Sq. Ft./Acre (Gallons per Day)</b>	<b>Total Flow (Gallons Per Day)</b>
Single Family Residential (Units)	1,520	220	334,400
Multiple Family Residential (Units)	380	145	55,100
Commercial/Office (Sq. Ft.)	577,000	0.15	86,550
Community Facilities (Public) (Acres)	16	2,000	32,000
Schools (Acres)	10	2,000	20,000
<b>Total</b>			<b>528,050</b>

Source: Mundie & Associates

<b>Impact D1.</b>	<b>Potential interference with existing onsite sewer main during construction.</b> Same as for the Cooperative Plan and the Preferred Plan, even though this alternative does not include a golf course.
<b>Impact D2.</b>	<b>Increase in demand for treatment capacity (project impact and cumulative impact).</b> Same as for the Cooperative Plan and the Preferred Plan.
<b>Impact D3.</b>	<b>Increase in demand for export capacity (project impact and cumulative impact).</b> Same as for the Cooperative Plan and the Preferred Plan.

### **c. Impacts of Alternative 3**

In Alternative 3, the SFWD site would be developed outside the City of Pleasanton and therefore would not be connected to the City's wastewater collection and treatment system. The impacts of this alternative are discussed in the County EIR, Chapter 4.3.

### **3. Mitigations**

**Impact D1.** Potential interference with existing onsite sewer main during construction.

<b>Measure D1a.</b>	<b>Relocate main and pump station, if necessary for this project, to a site providing satisfactory access, with no disruption of existing flows during the relocation process.</b>  Relocation of the sewer main would be subject to provisions of the SFWD easement and permit conditions.
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**Measure D1b. Follow best available practices for either abandoning the main and pump station in place or removing them in order to minimize health hazards.**

Implementation of Measures D1a and D1b would reduce Impact D1 to a less-than-significant level.

**Impact D2. Cumulative increase in demand for treatment capacity.**

**Measure D2a. Require payment of connection fees.**

Require that all new development pay the sewer system connection fees that are charged by the City of Pleasanton and DSRSD to finance any needed improvements, consistent with existing law. Fees are set at a level that is expected to pay for needed improvements.

The Cooperative Plan agreement provides that fees will be offset “by value attributable to Project’s use of recycled water. City will grant credit against its fees for the recycled water line [and] will support request for credit against Dublin San Ramon Services District (DSRSD) fees. . . ” (p. 5 of Cooperative Plan agreement).

**Measure D2b. Phase development so that demand for wastewater treatment capacity does not exceed capacity available to the City of Pleasanton.**

Restrict the issuance of building permits if treatment capacity is not available to the City at the time the permits are requested. This regulation would assure that capacity is not exceeded by the project in conjunction with other development in the City during the coming 5 to 10 years, and would be consistent with the City’s policy of allocating capacity on a first-come, first-served basis. While this measure insures no impact at the DSRSD plant, the project itself could be delayed, when only partially developed, until additional capacity is available.

**Measure D2c. Secure reservations/guarantees for capacity to ensure availability as development occurs.**

The project can secure “legally committed reserves,” to the extent that they are available and allocable according to the Growth Management Program, by paying the required fees and/or by agreement.

**Measure D2d. Require water conservation measures. Same as Measure C1b.**

If DSRSD treatment capacity is expanded before Pleasanton exceeds its capacity allotment, and provides sufficient capacity to accommodate treatment demand from development of the SFWD site in conjunction with demand from other Pleasanton projects, or if payment of connection fees (Measure D2a) secures sufficient capacity for the entire project, or capacity requirements are reduced (Measure D2d), then this impact will be mitigated to a less-than-significant level.

If capacity expansion cannot be achieved, then this impact will remain significant and unmitigated, unless project phasing precludes development that would exceed capacity (Measure D2b). Such phasing, however, could preclude development as proposed in the applicant’s statement of project objectives.

**Impact D3.** Increase in demand for export capacity (project impact and cumulative impact).

**Measure D3a.** Require payment of connection fees. Same as Measure D2a.

**Measure D3b.** Phase development so that demand for wastewater disposal capacity does not exceed capacity available to the City of Pleasanton.

Same as Measure D2b, except for export capacity instead of treatment capacity.

**Measure D3c.** Secure reservations/guarantees for capacity to ensure availability as development occurs.

Same as Measure D2c. If subsequent analysis should reveal that export capacity currently exists for the City of Pleasanton, it could be reserved for this project (as in Measure D2c).

**Measure D3d.** Require water conservation measures.

**Measure D3e.** Plan and build the onsite wastewater collection system to minimize infiltration and inflow.

Newer methods can minimize wet weather flows exceeding ADWF volumes; export facility expansions can be minimized by reducing infiltration and inflow.

**Measure D3f.** If export capacity becomes unavailable as the project develops, undertake measures to offset the project's demand for export capacity. Such measures may include:

- Retrofitting existing sewage lines to minimize infiltration and inflow or to conserve water, to reduce City wet weather flows to a level that can be handled by existing facilities.
- Retrofitting older residential/commercial plumbing fixtures to reduce sewage flows.
- Constructing treated effluent storage basin(s) to hold peak wet weather flows for later release.
- Routing peak wet weather flows back to the project for storage in golf course ponds.
- Treating wastewater generated by development on the project site with reverse osmosis to a level that meets water quality requirements for injection or irrigation.
- Purchasing unused wastewater export capacity from other jurisdictions or projects.

These measures would require separate environmental analysis and would likely be accomplished by City projects funded by the developer. Such funding could be credited against ordinary sewage system connection fees to the extent that they constitute permanent "capacity."

If LAVWMA disposal capacity is expanded before Pleasanton exceeds its capacity allotment, and provides sufficient capacity to accommodate demand from development of the SFWD site, then this impact will be mitigated to a less-than-significant level.

If Measures D3e, D3f, and D3g are able to reduce existing and project-generated flows sufficiently to offset the anticipated capacity shortfall, then this impact will be mitigated. This scenario is, however, considered unlikely: such mitigations, while lessening the severity of the impact, would not reduce it to a level of insignificance.



If disposal capacity is not expanded *and* existing and project-generated flows are not reduced sufficiently to offset the anticipated capacity shortfall, then this impact will remain significant and unmitigated, unless project phasing precludes development that would exceed capacity. Such phasing, however, could preclude development as proposed in the applicant's statement of project objectives.

#### **4. Summary Comparison of Impacts and Mitigated Impacts: Wastewater**

	<b>Cooperative Plan</b>	<b>Preferred Plan (Alternative 1)</b>
<b>Impact D1. Potential interference with existing onsite sewer main during construction.</b>	S/LS	S/LS
<b>Impact D2. Cumulative increase in demand for treatment capacity.</b>	S (C)/ND	S (C)/ND
<b>Impact D3. Increase in demand for export capacity.</b>	S (C)/ND	S (C)/ND

Key: \*/\*: significance before mitigation/significance after mitigation.

S: significant

(C): contributes to cumulative impact

LS: less than significant

n.a.: impact does not apply to this alternative

\* no mitigation required

ND: not determinable

† Less than significant before mitigation, but contributes to cumulatively significant impact.

NM: no mitigation possible (beyond policies, programs, and other regulations already in place).

## **E. PUBLIC SERVICES: EDUCATION**

### **1. Characteristics of the Project**

#### **a. Elementary School Sites**

The site plans identify three possible sites, 10 to 11 acres in size, for the elementary school, as shown in Chapter 4 (p. 37):

- The Cooperative Plan and Alternative 3 combine a five-acre building site on a graded portion of the knoll at the southern end of the East Parcel with a five-acre play area doubling as a neighborhood park.<sup>53</sup>
  - This site is at the edge of the specific plan area, and thus is oriented toward serving the student population of the residential neighborhoods to the east of the project as well as to students living on the SFWD site. Because the site is projected to generate 300 to 400 elementary school students, however, it is possible that this site could be on the edge of the attendance area, because it would be the closest school for all students from the project site and these students would fill most of the school's capacity.
  - The site is adjacent to the Alameda County transportation corridor.
  - The site is located on a major thoroughfare (Valley Avenue). Potential issues include primarily the safety of school children walking to and from the school via a route with heavy automobile traffic. At the same time, however, this site is remote from Bernal Avenue, which is expected to have the greatest amount of traffic congestion in the morning peak hour.
  - The site is across the street from the fire station site. Potential noise impacts of the fire station operations on the school are discussed in Chapter 5, Part L (Noise).
- The Preferred Plan school site is also on the East Parcel but farther north: it is on the south side of Junipero Street, adjacent to the Alameda County transportation corridor. Important characteristics are:
  - The site is not located on a major thoroughfare, but it is on the through route from Valley Avenue to Sunol Boulevard. Traffic volumes on these roads would be similar, but traffic speeds on the Preferred Plan route are expected to be slower.
  - The site is adjacent to the fire station site. Potential noise impacts of the fire station operations on the school are discussed in Chapter 5, Part L (Noise).
- Alternative 2 sites the school on the Central Parcel. Important characteristics of this location are:
  - This site is in the center of the specific plan area, and thus is oriented primarily toward serving the student population of the SFWD site.
  - The site is across a minor street from the lake.

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<sup>53</sup> Alternative 3 also provided an alternate school site on the south side of Junipero Street, adjacent to the Alameda County Transportation Corridor. This site is the same as location of the school site in the Preferred Plan.



- The site is on a local street rather than a through route. Traffic volumes are expected to be lighter on this road than on Valley Avenue (Cooperative Plan) or Junipero Street (Preferred Plan).

## **b. Middle School**

As part of the project, the Pleasanton Middle School site would be annexed to the City of Pleasanton.

## **2. Setting**

The Pleasanton Unified School District (PUSD) encompasses the entire City of Pleasanton and some area beyond the city limits, including the study area. As a unified school district, PUSD provides public education from kindergarten through high school.

At the present time, the district has seven elementary schools (kindergarten through grade 5), two middle schools (grades 6 through 8) and two high schools (grades 9 through 12). Typical school capacities and class sizes are summarized in Table 21.

**Table 21**  
**Typical School Capacities and Class Sizes**

Type of School	Typical Capacity	Class Size	
		Limit	Current
Elementary School	600-650 <sup>a</sup>	K-3: 32	30
		4-5: 33	33
Middle School	1,000	34	26 <sup>b</sup>
High School	1,700-2,000 <sup>c</sup>	none	27 <sup>b</sup>

<sup>a</sup> According to the 1996 Growth Management Report, one school has an ideal capacity of about 570 students and one has a capacity for about 835 students.

<sup>b</sup> These figures represent staffing ratios rather than class sizes.

<sup>c</sup> Based on plans for remodeling of Foothill and Amador High Schools. The 1996 Growth Management Report indicates that current capacities are 1,400 students at Foothill and 1,800 students at Amador, these capacities would be increased to 2,000 and 2,500 students, respectively, in the first decade of the next century.

Source: Pleasanton Unified School District, personal communication from Bill James and Buster McCurtain to Mundie & Associates, January 10, 1995

Enrollments at the various district schools during the 1995 and 1996-97 academic years are shown in Table 22. Overall, elementary school enrollment increased by about seven percent, middle school enrollment by about five percent, and high school enrollment by about one percent during the one-year period. In 1996-97, class size reduction was implemented in Grade 1, limiting those classes to no more than 20 students.

**Table 22**  
**Enrollment at and Capacities of Pleasanton Schools, 1995-96 and 1996-97 Academic Years**

School	Enrollment		Optimal Capacity	Pct. Utilization 1996-97
	1995-96	1996-97		
<b>Elementary Schools</b>				
Alisal	737	837	654	128%
Donlon	927	939	834	113%
Fairlands	644	670	678	99%
Lydiksen	590	694	573	121%
Valley View	648	664	660	101%
Vintage Hills	556	673	576	117%
Walnut Grove	916	914	774	118%
<i>Total</i>	<i>5,018</i>	<i>5,391</i>	<i>4,749</i>	<i>114%</i>
<b>Middle Schools</b>				
Harvest Park	1,033	1,060	920	115%
Pleasanton	1,377	1,480	1,142	130%
<i>Total</i>	<i>2,410</i>	<i>2,540</i>	<i>2,062</i>	<i>123%</i>
<b>High Schools</b>				
Amador	1,794	1,809	1,800	101%
Foothill	1,212	1,252	1,400	89%
Village/Alternative	181	170	n.a.	n.a.
<i>Total</i>	<i>3,187</i>	<i>3,231</i>	<i>3,200</i>	<i>101%</i>

Source: City of Pleasanton 1996 Growth Management Report Update; Pleasanton Unified School District, California Basic Educational Data System (CBEDS) report, 1996

The table also compares enrollment in 1996-97 to the design capacities of the schools. Schools at all grade levels have enrollment exceeding capacity, with the greatest excesses in the middle schools (23 percent) and elementary schools (14 percent).

When optimal capacity at a school is exceeded, the additional enrollment is accommodated in portable classrooms or a reduction in the number of rooms reserved for special programs. New schools are added as district-wide enrollment reaches the number of students that would be required to justify an additional school. As an interim measure, the district may adjust school attendance boundaries to maximize the efficiency of classroom use. A new elementary school (Mohr) is currently under construction in northeast Pleasanton. When it is completed, in time for the 1997-98 academic year, it will accommodate 600 students and significantly reduce the over-capacity conditions in the existing facilities.

The district anticipates additional enrollment from new residential development based on estimated "student yield factors"; that is, the average number of students per housing unit. Table 23 summarizes the most recent estimates of student yield factors.

According to the City of Pleasanton's 1996 Growth Management Report, the present school facilities plan is adequate to accommodate expected future enrollment consistent with "moderate growth" of the City's population. That forecast anticipates the addition of roughly 15,000 new residents every 10 years. The



schools plan calls for construction of several new elementary schools during the next 10 to 15 years; one of these would be located within the San Francisco Water Department lands. (City of Pleasanton, *Municipal Facilities Master Plan*, p. 124.) The plan also calls for construction of a new middle school, to be constructed in time for the 1998-99 school year. Finally, it includes improvements to the district's two high schools to increase their capacities to 2,000 students at Foothill and 2,500 students at Amador. These improvements are anticipated during the first decade of the next century.

**Table 23**  
**Student Yields**

	Grade Level			
	K-5	6-8	9-12	Total
<b>Single Family Detached Units</b>				
Low density (large lot; <2 units/acre)	0.37	0.13	0.31	0.81
Medium density (medium lot; 2-8 units/acre)	0.44	0.17	0.19	0.80
High density (small lot; >8 units/acre)	0.19	0.08	0.09	0.36
<b>Multiple Family/Other Units</b>				
Townhouses/Duet homes	0.04	0.01	0.03	0.08
Condominiums/Apartments	0.04	0.01	0.03	0.08

Note: Student yield estimates are for new housing units.

Source: City of Pleasanton, 1996 Growth Management Report Update, Table V.b-6 (page V.b-21)

The 1996 Growth Management Report notes that, beginning in 1996-97, State funding has been made available to reduce certain elementary school class sizes to 20 students. (As shown in Table 21, the average class size was previously 30 to 33 students, depending on grade level.) Options for accommodating the increased number of classrooms include use of portable buildings, modifications to existing classrooms, or provision of additional schools. The report suggests that the school district will monitor the impacts of the new classroom size options, and adjust its master plan as needed.

As noted earlier in this chapter, the City of Pleasanton has adopted a Growth Management Program, which is intended to insure the adequacy of city facilities and services to serve new development as it occurs. This program relies on the regulation of construction phasing/timing and the collection of fees to pay for facilities as they are needed. This program provides a framework for two types of arrangements that are already in place to collect school impact fees, levied on new construction, for provision of new school facilities, consistent with state law:

- Pursuant to one form of agreement among the City of Pleasanton, the Pleasanton Unified School District and residential developers, residential developers pay the district \$4.38 per square foot of livable building space for single family units and \$2.06 per square foot for multi-family units.
- Another form of this agreement calls for developers to pay \$3.78 per square foot for single family units and \$2.06 per square foot for multi-family units. Under this latter agreement (which is available only to projects with more than 200 for-sale units and a buildout period of longer than three years), no building permits are issued if there is a shortfall in funding until the shortfall is cured,

and curing the shortfall may require the developer to pay an additional amount such that the total fee may exceed \$4.38 per square foot. The District also levies a fee of \$0.30 per square foot on commercial, office, and industrial construction. All of these fees are payable directly to the school district when the building permit is issued, and are subject to adjustment for inflation. The district uses these revenues to purchase school sites and build facilities.

### **3. Impacts**

#### **a. Impacts of the Cooperative Plan and the Preferred Plan**

Residential development on the project site would accommodate school-age children, and therefore could have impacts on the need for school facilities. Two aspects of the project's relationship to school facilities must be considered: (1) need for and timing of additional schools and/or classrooms and (2) the location and configuration of new school facilities.

***(1) Need for Additional Schools.*** Both the Cooperative Plan and the Preferred Plan would permit the development of 1,600 to 1,900 housing units on the Bernal Property. If the ultimate total is closer to 1,600 units, then there will be more medium-lot single family homes, since the average density would be lower; these homes would yield (on average) more students per household. If the total is closer to 1,900 units, there will be relatively more small-lot single family units, which yield (on average) fewer students per household.

This analysis considers two alternative cases: one with 1,600 units and one with 1,900 units. Because the precise number and types of units that will be built are as yet undetermined, this approach provides a range estimate of potential impacts on school enrollment and the need for educational facilities.

The distribution of unit types assumed in each case and the resulting student yields, based on the factors shown in Table 23, are summarized in Table 24. These calculations indicate that a project with 1,600 units would generate an estimated 738 new students in all grade levels, and a project with 1,900 units would generate an estimated 578 students. Overall, the lower-density (1,600 unit) project would have an average of 0.46 students per household, while the higher-density (1,900 unit) project would have an average of 0.30.

The number of new elementary school students that would live in the study area would require the construction of a new school, because existing schools will likely remain at or near their ideal capacities during the buildout period of this project. This school would be accommodated by the site included in the specific plan. An adverse impact on schools could result, however, if the new school is not built in a timely manner. This impact would be a project impact and a cumulative impact.

<b>Impact E1.</b> <b>Potential increase in elementary school enrollment exceeding ideal school district capacity in existing schools.</b>
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City policy requires cooperation with the School District to "encourage limited elementary school enrollment size (up to 650 students) to maintain neighborhood character and promote more personalized education." To be consistent with this policy, the project site requires an elementary school.

<b>Impact E2.</b> <b>Introduction of a critical mass of school-aged population into a neighborhood with no existing elementary school.</b>
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**Table 24**  
**Projected Impacts on School Enrollment**

	Units	Grade Level			
		K-5	6-8	9-12	Total
Project with 1,600 units					
Single Family (medium lot)	610	268	104	116	488
Single Family (small lot)	610	116	49	55	220
Multi-family (townhouse/condominium)	380	15	4	11	30
Total	1,600	400	156	182	738
Project with 1,900 units					
Single Family (small lot)	1,520	289	122	137	547
Multi-family (townhouse/condominium)	380	15	4	11	30
Total	1,900	304	125	148	578

Note: Student yield estimates are for new units.

Source: Mundie & Associates, based on Table 23

The number of middle school students expected to live in the study area would contribute to an increase in the district-wide middle school student body. The district has plans to build a new school that would be ready for use by the 1998-99 school year, and would thereby expand its currently-overloaded capacity to accommodate these students. The new students from the project area would contribute to cumulative absorption of middle school capacity.

**Impact E3. Cumulative increase in middle school enrollment exceeding ideal school district capacity in existing schools.**

New high school students expected to live in the project area could be accommodated within existing and planned district facilities. Some adjustments in attendance boundaries may be required.

**(2) Location of School Facilities.** As noted in "Characteristics of the Project" (p. 123), the school site in the Cooperative Plan is located on a graded site on the knoll, at the southern end of the East Parcel. This site raises the following issues:

- Location potentially at the edge of the attendance area (since two-thirds of the school's capacity could be filled by students living in the project area). This condition is inconsistent with the General Plan policy that encourages neighborhood schools to maintain neighborhood character.
- Location adjacent to the Alameda County Transportation Corridor. At the present time, there is no train service on this corridor during the week; therefore, noise and vibrations would not be an issue. In the future, commuter service could be provided on this corridor, and noise and vibrations could affect the school environment. In addition, safety issues could arise as a result of the proximity between the school site and the train route.

- The site is located on a major thoroughfare (Valley Avenue). Potential issues include primarily the safety of school children walking to and from the school via a route with heavy automobile traffic. At the same time, however, this site is remote from Bernal Avenue, which is expected to have the greatest amount of traffic congestion in the morning peak hour.
- Location across the street from a potential fire station site. Potential noise impacts of the fire station operations on the school are discussed in Chapter 5, Part L (Noise).

In the Preferred Plan, the school site is located on the south side of Junipero Street (extended into the site), adjacent to the Alameda County transportation corridor. This location has some of the same characteristics as the Cooperative Plan site: it is at the eastern edge of the specific plan area, adjacent to the Alameda County transportation corridor. It differs from the Cooperative Plan site in the following:

- Location on the through route from Valley Avenue to Sunol Boulevard. The character of Junipero Street is not governed by the specific plan. Whether it is a residential street or not, it has the potential to carry as much traffic as an extended Valley Avenue (e.g., in the Cooperative Plan). As in the Cooperative Plan, potential issues include primarily the safety of school children walking to and from the school via a route with heavy automobile traffic.
- The site is adjacent to a potential fire station site. Potential noise impacts of the fire station operations on the school are discussed in Chapter 5, Part L (Noise).

<b>Impact E4.</b> <b>Potential for safety, noise, and/or attendance area conflicts related to location of school facilities.</b>
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#### **b. Impacts of Alternative 2**

**(1) Need for Additional Schools.** The impacts of Alternative 2 on school enrollment would be the same as those of the Cooperative Plan and the Preferred Plan, because the maximum number of housing units, and the assumed composition of those units, is the same in all plans.

<b>Impact E1.</b>	<b>Potential increase in elementary school enrollment exceeding ideal school district capacity in existing schools.</b>  Same as for the Cooperative Plan and the Preferred Plan.
<b>Impact E2.</b>	<b>Introduction of a critical mass of school-aged population into a neighborhood with no existing elementary school.</b>  Same as for the Cooperative Plan and the Preferred Plan.
<b>Impact E3.</b>	<b>Cumulative increase in middle school enrollment exceeding ideal school district capacity in existing schools.</b>  Same as for the Cooperative Plan and the Preferred Plan.

**(2) Location of School Facilities.** In Alternative 2, the elementary school site is located in the southern third of the Central Parcel.

Given the proximity of the lake, the potential for safety conflicts is an impact of this alternative.



**Impact E4. Potential for safety and/or noise conflicts related to location of school facilities.**  
Same as for the Cooperative Plan and the Preferred Plan.

### **c. Impacts of Alternative 3**

In Alternative 3, as many as 2,500 housing units could be developed on the SFWD site. The impacts of this alternative are discussed in the County EIR, Chapter 4.8.

## **4. Mitigation Measures**

**Impact E1. Potential increase in elementary school enrollment exceeding ideal school district capacity in existing schools.**

**Measure E1a. Development in the project area shall pay school impact fees to the School District at the same rate as other properties in the City of Pleasanton, subject to agreement between the School District and Master Developer giving consideration to the designation and acquisition of a school site.**

**Measure E1b. Project sponsor shall seek agreement with PUSD, and City shall urge PUSD, to build a new elementary school that provides, at a minimum, the core facilities and classrooms required to serve a student population of 300 so that project elementary students do not cause enrollment at then-existing elementary schools to exceed their ideal capacities, using the site dedicated by the project and the impact fees paid as development occurs.**

If agreement is reached and the school is built as provided in Measure E1b, then Impact E1 would be mitigated to a less-than-significant level. If no agreement is reached between the project sponsor and the PUSD regarding construction of an elementary school with core facilities to accommodate 300 students at the appropriate time, then a significant adverse impact on school facilities would occur.

**Impact E2. Introduction of a critical mass of school-aged population into a neighborhood with no existing elementary school.**

**Measure E2a. Prior to adoption of the development agreement for the area, reserve a five-to-ten acre site for an elementary school.**

**Measure E2b. In order to facilitate early development of the school, grant the school site to the Pleasanton Unified School District, when requested by the District, in graded, developable condition, in exchange for a credit toward future school fees.**

**Measure E2c.** Project sponsor shall seek agreement with PUSD, and City shall urge PUSD, to build a new elementary school that provides, at a minimum, the core facilities and classrooms required to serve a student population of 300 so that so the school is operational when the number of elementary school students living in the project area reaches 300, using the site dedicated by the project and the impact fees paid as development occurs.

**Measure E2d.** Build infrastructure to serve the school site in a timely manner.

If Measures E2b and E2d are implemented, and agreement is reached and the school is built as provided in Measure E2c, then Impact E2 would be mitigated to a less-than-significant level. If no agreement is reached between the project sponsor and the PUSD regarding construction of an elementary school with core facilities to accommodate 300 students at the appropriate time, then a significant adverse impact on elementary school children living in the project area would occur.

**Impact E3.** Cumulative increase in middle school enrollment exceeding existing ideal school district capacity in existing schools.

**Measure E3.** Development in the project area shall pay school impact fees to the School District at the same rate as other properties in the City of Pleasanton, subject to agreement between the School District and Master Developer giving consideration to the designation and acquisition of a school site.

Same as Measure E1.

**Impact E4.** Potential for safety, noise, and/or attendance area conflicts related to location of school facilities.

**Measure E4a.** As a condition of the development agreement for the area, require the developer to reach agreement with the Pleasanton Unified School District on the location of the elementary school site and the protective features that must be incorporated into the development of the site, prior to the commencement of any development on the site.

**Measure E4b.** Project sponsor shall provide convenient and safe routes for school children throughout the project area to both the elementary school site and the PUSD Middle School as the project develops.

With implementation of these mitigation measures, the potential impact on schools would be reduced to a less than significant level.



## **5. Summary Comparison of Impacts and Mitigated Impacts: Education**

	<b>Cooperative Plan</b>	<b>Preferred Plan (Alternative 1)</b>
<b>Impact E1.</b> <b>Potential increase in elementary school enrollment exceeding ideal school district capacity in existing schools.</b>	<b>S (C)/ND<sup>†</sup></b>	<b>S (C)/ND<sup>†</sup></b>
<b>Impact E2.</b> <b>Introduction of a critical mass of school-aged population into a neighborhood with no existing elementary school.</b>	<b>S/ND</b>	<b>S/ND</b>
<b>Impact E3.</b> <b>Cumulative increase in middle school enrollment exceeding ideal school district capacity in existing schools.</b>	<b>S (C)/LS</b>	<b>S (C)/LS</b>
<b>Impact E4.</b> <b>Potential for safety, noise, and/or attendance area conflicts related to location of school facilities.</b>	<b>S/LS</b>	<b>S/LS</b>

Key: \*/\*: significance before mitigation/significance after mitigation.

S: significant

(C): contributes to cumulative impact

LS: less than significant

n.a.: impact does not apply to this alternative

\* no mitigation required

ND: not determinable

<sup>†</sup> Less than significant before mitigation, but contributes to cumulatively significant impact.

NM: no mitigation possible (beyond policies, programs, and other regulations already in place).

## F. PUBLIC SERVICES: POLICE

### 1. Setting

The Pleasanton Police Department provides police services within the Pleasanton city limits. The Pleasanton Police Department is located in its own building at 4833 Bernal Avenue.

The department is organized into two divisions: (1) Operations and (2) Investigations and Support Services. The Operations Division is responsible for patrol, traffic, response to calls for service, parking enforcement, special events, and animal service. The Investigations/Support Services Division is responsible for follow-up investigations of all adult and juvenile crimes, the DARE (Drug Abuse Resistance Education) program, minor offense court (a juvenile diversionary program), special investigations, budget preparation and management, maintenance of the police building and of police vehicles, dispatch, training, and records.

The Police Department is currently authorized to have a staff of 81 sworn officers, 30 full-time non-sworn staff, and approximately 20 volunteers. The Pleasanton City Council determines short-term Police Department personnel needs during the budget cycle every two years.

The Department has a goal of responding to all calls in an average of 18 minutes, and to emergency calls in an average of 4 minutes. The Department also attempts to clear 35 percent of cases involving Part I crimes. (Part I crimes are defined by the U.S. Department of Justice; they include homicide, rape, robbery, aggravated assault, theft, burglary, and auto theft. "Case clearance" is the arrest or identification of the person responsible for such a crime.) In 1995, the department exceeded its response time goal (average response time of 18.3 minutes for all calls and 3.9 minutes for emergency calls) and cleared 36 percent of its cases.

The Police Department occupies all of the space in its existing building: the locker room is overcrowded and the juvenile detention facility is inadequate. The *Municipal Facilities Master Plan* (p. 56) anticipates and provides for modifications to the existing facility to meet the needs of all staff expected to be required to serve the residents and businesses of Pleasanton when all development anticipated by the General Plan has occurred. These modifications/additions include expansion of the existing building in two areas: (1) on the west side, to provide additional locker room and exercise facilities, and (2) on the east side, where a two-story addition will provide additional space for Support Services, Juvenile Services Bureau and Crime Prevention. These two expansions will provide 7,714 additional gross square feet of building space.

Police Department staff observe that new development in the City will require additional staff to allow maintenance of current service standards. Currently-known major projects that will affect demand for police services are the Ruby Hill residential development, on the east side of the city, the new East Dublin/Pleasanton BART station, adjacent to Interstate 580 at Hopyard Road, and the Sears commercial development at Stoneridge. In addition, ongoing infill development in the City of Pleasanton adds demand for police services. The proposed physical modifications to the existing police facility, providing locker space for additional officers and new detention space for suspects, are those anticipated to serve the full build-out of the City's General Plan, including the SFWD Bernal property.



## **2. Impacts**

### **a. Impacts of the Cooperative Plan and the Preferred Plan**

To maintain response times and case clearance rates, the Police Department would need to add personnel as new development occurs in the study area. Changes in personnel are not considered an impact under CEQA unless they cause changes in the physical environment. Because changes in the police building that would be required to accommodate new staff are already included in the General Plan, the staffing changes that would result from this project would not be considered to have an impact on the environment. They would, however, intensify the existing need for implementation of the building changes that are included in the General Plan. These changes have been budgeted for fiscal year 1997 and are expected to be completed prior to development of the SFWD site.

### **b. Impacts of Alternative 2**

The impacts of Alternative 2 on police services would be the same as those of the Cooperative Plan and the Preferred Plan.

### **c. Impacts of Alternative 3**

In Alternative 3, the SFWD site would be developed outside the City of Pleasanton; as a result, the City would not be primarily responsible for police protection. The impacts of this alternative are discussed in the County EIR, Chapter 4.6.

## **3. Mitigation Measures**

Because the expected impacts of the project would affect staffing but result in no physical changes to the environment, no mitigation measures are required.

## **G. PUBLIC SERVICES: FIRE PROTECTION**

### **1. Characteristics of the Project**

The Cooperative Plan agreement states that the project “will dedicate an approximately one-acre site for [a] fire station at the northeast intersection of Valley and Case Avenues consistent with Pleasanton’s “ ‘Master Fire Service Plan’ ” (p. 4).

The Preferred Plan provides a one-acre site for a fire station on the south side of Junipero Avenue at the eastern boundary of the project area.

In both plans, Junipero Street would be extended to Case Avenue. (This extension has already been completed.)

### **2. Setting**

#### **a. Livermore/Pleasanton Fire Department**

The Livermore/Pleasanton Fire Department provides fire protection services to the City of Pleasanton. As a full service department, its services include fire, medical, rescue, fire prevention and public education. The department has a mutual aid agreement with all departments in the Tri-Valley area, and a Coordinated Response agreement with the City of Dublin and the Alameda County Fire Department for the Ruby Hill development and surrounding unincorporated area. The department works closely with the California Department of Forestry station in Sunol. Under mutual aid, the department responds with one or more companies when requested to do so by another jurisdiction; under the Coordinated Response agreement, the Fire Department responds simultaneously on first alarm assignment, without waiting for a mutual aid request from the responsible jurisdiction.

Services are delivered from four existing stations. Station 1 is located at 4444 Railroad Street and is the closest existing station to the study area; Station 2 is at 6300 Stoneridge Mall Road; Station 3 is at 3200 Santa Rita Road; and Station 5 (which opened in September 1996) is on Vineyard Avenue in the Ruby Hill area. Each station is equipped with a fire engine, and is staffed 24 hours per day by an engine company (three to four firefighters). Station 1 also houses a second engine company, pending completion of the new Station 4 (see below).

Future Station 4, which will be located in the vicinity of Bernal Avenue and Del Valle Parkway, on the east side of the city, is expected to be operational within two years. The site for this station was purchased in September 1996, and funding for construction is in place. The station will be staffed by Engine Company #4, which is currently located with Engine Company #1 in Station 1.

The department has a goal of responding to all emergency calls within five minutes. In 1995, the average emergency response time was 4.26 minutes, and the department responded to 84 percent of structure fire calls within its five-minute target time. In that year, department personnel responded to 244 fire incidents and 2,902 total incidents (of which 1,724 were medical calls and 142 were mutual aid/contract calls).

The Pleasanton *Municipal Facilities Master Plan* (Master Plan) states that the Livermore/Pleasanton Fire Department is interested in relocating Fire Station Number 1, and that the project area would be a good location for the new station. According to the 1996 Growth Management Report, “the relocation of Fire



Station No. 1 to the San Francisco Water Department property will improve the City's response time to the south-central portion of the City."<sup>54</sup>

A site owned by the City and County of San Francisco, located immediately west of the existing public library (on the north side of Old Bernal, outside the specific plan area) has also occasionally been suggested as a potential fire station site. The San Francisco property would meet or exceed all of the criteria specified for locating the fire station on the SFWD site.

The City of Pleasanton has adopted a Growth Management Program, which is intended to insure the adequacy of city facilities and services to serve new development as it occurs. This program relies on the regulation of construction phasing/timing to assure that facilities are available as they are needed.

#### **b. Fire Protection in Unincorporated County Areas near Pleasanton**

The County of Alameda provides fire protection in unincorporated areas of the county. In the vicinity of the study area, fire protection is delivered from the California Department of Forestry and Fire Protection station in Sunol. The station is equipped with a fire engine that is owned by the county and is staffed by the California Department of Forestry under a contract with County, which pays for two of the three firefighters (per shift) stationed there. responds to structural fires in the community of Sunol; it also responds to some wildland fires.

The Livermore/Pleasanton Fire Department provides fire protection to the unincorporated areas of Castlewood (south of the City west of I-680), Happy Valley (south of the City east of Sunol Boulevard), and Remen (in the vicinity of Vineyard and Bernal Avenues).

### **3. Impacts**

#### **a. Impacts of the Cooperative Plan and the Preferred Plan**

Areas within the five-minute response time standard from existing fire stations are shown in Figure 18. (The response time shown in this diagram is calculated based on a different method from the method used for the General Plan, and the estimated of the five-minute boundary is different as a result of this change.) Portions of the SFWD site outside the five-minute response time.

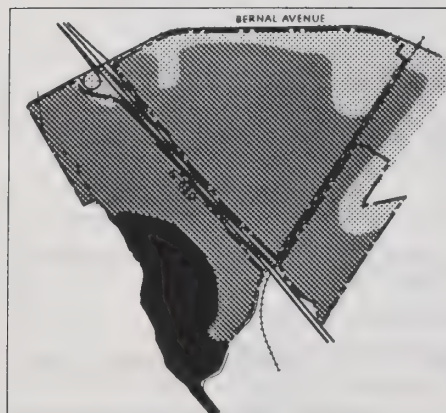
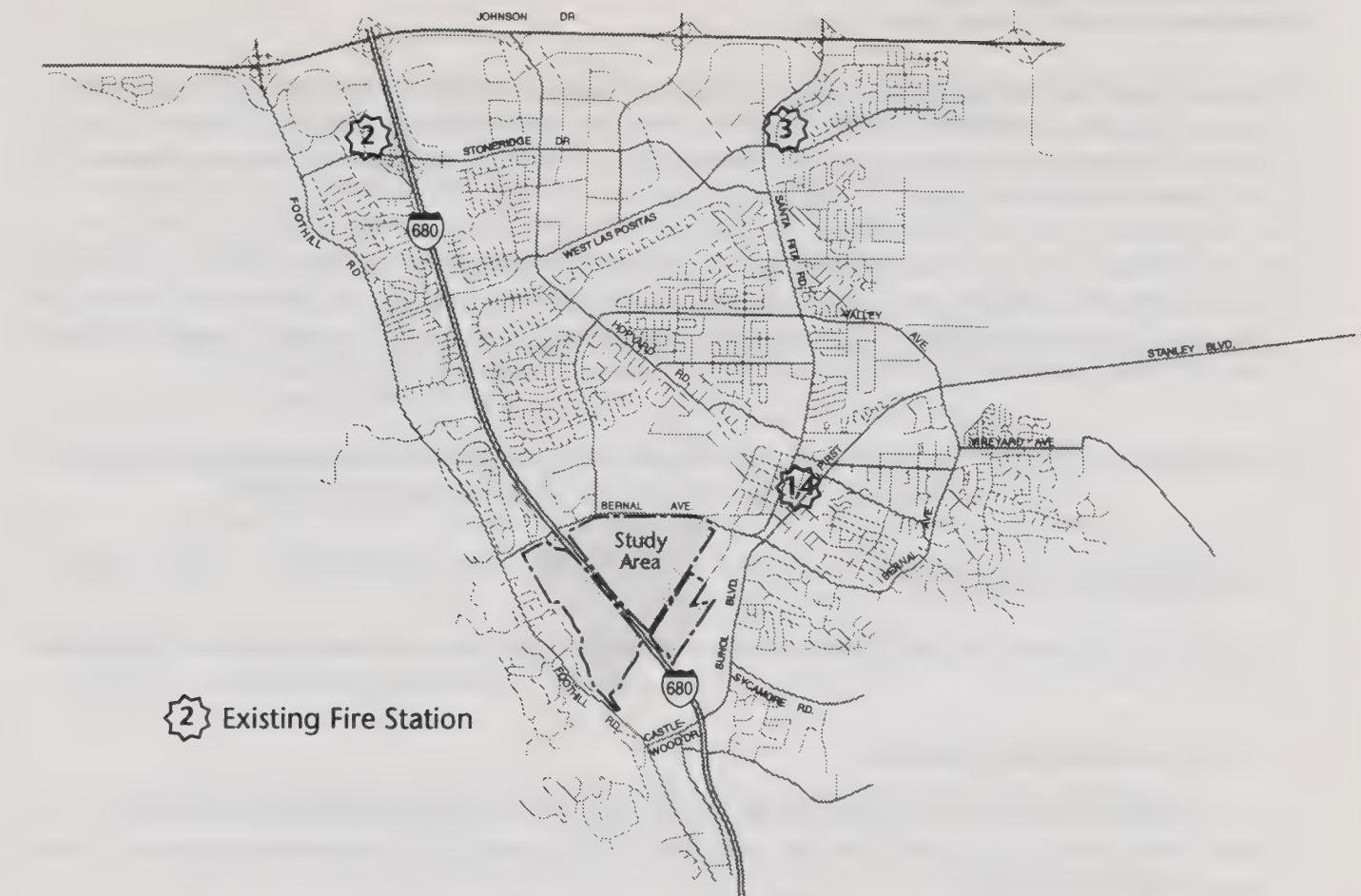
Response times from two alternative locations for Fire Station #1 are also shown in Figure 18. By relocating Station 1 to either of the alternative sites, the Fire Department would be able to serve most of the project within the five-minute response time target.

Response time for second- and third-arriving engine companies is also important in providing satisfactory fire service. In relocating Fire Station #1, five-minute response coverage for all responding stations will be taken into account.

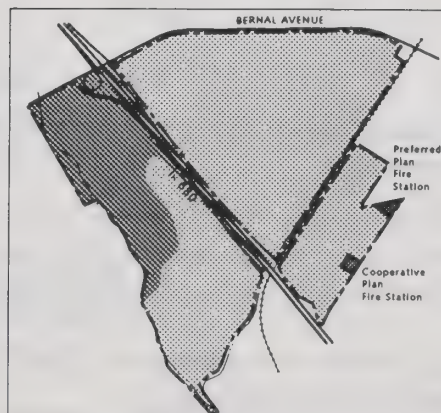
**Impact G1: Potential development beyond five-minute fire department response time area from existing fire stations.**

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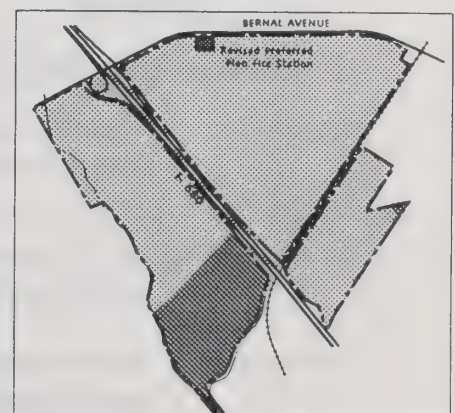
<sup>54</sup> City of Pleasanton, 1996 Growth Management Report, page VI.b-14.



Response times with fire stations in current location (see area map above).



Response times with future fire station site in Cooperative Plan & Preferred Plan.



Response times with future fire station site in Option A location (see Figure 8B)

Response Time for the first engine

- < 5 minutes
- 5-7 minutes
- > 7 minutes

Figure 18

## Existing and Potential Fire Station Locations and Response Times



Streets in the Preferred Plan have narrower widths than standard Pleasanton Streets, and several intersections are characterized by roundabouts for traffic calming. The transportation analysis (Chapter 5, Part J) indicates that streets and intersections with this configuration would be adequate for emergency response by fire department vehicles.

In combination with other planned, proposed, and approved development, including buildout of development anticipated by the Pleasanton General Plan, development according to the Cooperative Plan or the Preferred Plan would contribute to demands for fire protection that would eventually expose additional portions of the fire service area to risk in the form of response times exceeding five minutes.

**Impact G2: Cumulative increase in demand for fire protection services, leading to increase in the area exposed to emergency response times exceeding five minutes.**

#### **b. Impacts of Alternative 2**

The impacts of Alternative 2 on fire protection would be the same as those of the Cooperative Plan and the Preferred Plan.

#### **c. Impacts of Alternative 3**

In Alternative 3, the SFWD site would be developed outside the City of Pleasanton; as a result, the City would not be primarily responsible for fire protection. The impacts of this alternative are discussed in the County EIR, Chapter 4.5.

### **4. Mitigation Measures**

**Impact G1: Potential development beyond five-minute emergency fire department response time area from existing fire stations.**

**Measure G1a: Phase construction so that relocated fire station is operational before development occurs outside the five-minute response time area.**

**Measure G1b: Require that all residences or other buildings outside the five-minute response time area be equipped with fire sprinklers.**

At present, Pleasanton requires that all structures of 8,000 square feet or more, structures in High Hazard areas, and structures outside a five-minute response time be sprinklered; Livermore requires that all habitable structures be sprinklered. The Fire Department has advocated modification of the Pleasanton code to apply to all residential and nonresidential structures larger than 200 square feet. If this new standard or any change from the existing standard is adopted prior to development of any portion of the site, subsequent development should conform to the new requirement.

Implementation of Measures G1a and G1b would reduce the potential increased risk from excessive response times to a less-than-significant level.

**Impact G2:** Cumulative increase in demand for fire protection services, leading to increase in the area exposed to emergency response times exceeding five minutes.

As a matter of law, all construction must comply with the Uniform Building Code (UBC) and the Uniform Fire Code (UFC). The Livermore/Pleasanton Fire Department has recommended that conditions included in Measure G1 be applied at subsequent stages of the approval process.

**Measure G2a:** Equip all habitable structures larger than 500 square feet with automatic sprinklers.

Same as Measure G1b.

**Measure G2b:** Require that all of the roads into and within the project be available for public access; that is, no gates should be installed to restrict traffic flows.

**Measure G2c:** Locate the fire station site on a street that has a direct connection to Sunol Boulevard.

Implementation of Measures G2a through G2c would reduce the contribution of the proposed project to cumulative impacts on fire protection to a less-than-significant level.

## **5. Summary Comparison of Impacts and Mitigated Impacts: Fire Protection**

	<b>Cooperative Plan</b>	<b>Preferred Plan (Alternative 1)</b>
<b>Impact G1.</b> Potential development beyond five-minute emergency fire department response time area from existing fire stations.	S/LS	S/LS
<b>Impact G2.</b> Cumulative increase in demand for fire protection services, leading to increase in the area exposed to emergency response times exceeding five minutes.	S(C)/LS	S(C)/LS

Key: \*/\*: significance before mitigation/significance after mitigation.

S: significant

(C): contributes to cumulative impact

LS: less than significant

n.a.: impact does not apply to this alternative

\* no mitigation required

ND: not determinable

† Less than significant before mitigation, but contributes to cumulatively significant impact.

NM: no mitigation possible (beyond policies, programs, and other regulations already in place).



## H. PUBLIC SERVICES: PARKS AND COMMUNITY SERVICES

### 1. Characteristics of the Project

Park and open space acreage provided by each of the project alternatives is summarized in Table 25 and described below.

**Table 25**  
**Summary of Park Land Provisions**

Type of Park	Cooperative Plan	Preferred Plan	Alternative 2
Neighborhood	10.0	16.0	24.6
Community Active Use	20.0	20.0	21.9
Community Special Use	157.0	169.8	0.0
Golf Course	157.0	168.2	0.0
Other (Village Green)	0.0	1.6	0.0
Community Natural/Open Space	35.0	44.1	163.1
Lake	0.0	0.0	88.5
Other	35.0	44.1	74.6
Total	222.0	249.9	209.6

Source: Mundie & Associates

#### **a. Cooperative Plan**

**(1) Neighborhood Parks.** The Cooperative Plan provides two five-acre neighborhood parks: one on the West Parcel, in the northwestern corner of the site adjacent to the Arroyo and the other on the East Parcel, adjacent to the elementary school. This latter park is the same as the playfields for the school.

**(2) Community Parks.** A community active use park of 20 acres is located in the northeast corner of the Central Parcel. The golf course, which encompasses 157 acres, is located on the Central and West Parcels; it serves as a community special use park.

**(3) Community Natural/Open Space.** Land along the Arroyo de la Laguna is reserved in open space.

**(4) Community Trails.** The Cooperative Plan accommodates the trails shown in the *Community Trails Master Plan*. These trails are located (1) on the Central Parcel along the south side of Bernal Avenue, Valley Avenue, and the west side of the Union Pacific Railroad (UPRR) right-of-way, and (2) along the Arroyo de la Laguna and across the southern part of the West Parcel, the southern tip of the Central Parcel, and the southern part of the East Parcel (along the north side of the knoll) to the Alameda County Transportation Corridor ("transportation corridor") in the former Southern Pacific Railroad right-of-way.

**(5) Regional Open Space.** The Cooperative Plan agreement provides for a contribution by the project sponsor to address the regional open space demands of project residents:

Project will contribute a fee equal to \$1 million for public open space preservation. Preservation will be accomplished through purchase of land in fee title, acquisition of easements or development rights, dedication, or such other mechanisms that provide for long-term preservation of land in open space. Alameda County and City of Pleasanton will jointly decide on use of the funds, with San Francisco and EBRPD included as participants in the decision-making process. In addition, the Project will fund a program, acceptable to Alameda County, for preservation of open space valued at \$750,000 through conservation easements on, or dedication of, Water Department property or acquisition of lands that would meet both open space and watershed protection objectives. (These easements or lands would not include the Arroyo and the buffer area around it. As an alternative to dedication of land or easements, the project may make a cash payment of \$750,000 toward a preservation program.)

**b. Preferred Plan**

**(1) Neighborhood Parks.** The Preferred Plan provides three five-acre neighborhood parks: one on the West Parcel, in the northwestern corner of the site adjacent to the Arroyo (same as the location in the Cooperative Plan), one in the Community Park, in the Central Parcel, and one on the East Parcel, adjacent to the elementary school (the playfields for the school) and including the willow grove. In addition, consistent with the neo-traditional approach of providing small parks throughout residential areas, the Preferred Plan includes neighborhood parks of one to two acres in size at the Village Green (near the Village Center) and in the southern portion of the West Parcel.

**(2) Community Parks.** A community active use park of 20 acres is located in the northeast corner of the Central Parcel (same as in the Cooperative Plan). The golf course encompasses approximately 168 acres on the Central and West Parcels; as in the Cooperative Plan, it serves as a community special use park. The Village Green, located on the Central Parcel, also functions as community special use park.

**(3) Community Natural/Open Space.** Land along the Arroyo de la Laguna and on the knoll is reserved in open space.

**(4) Community Trails.** Like the Cooperative Plan, the Preferred Plan accommodates the trails shown in the *Community Trails Master Plan*.

**(5) Regional Open Space.** The Preferred Plan provides for the same contribution to regional open space as the Cooperative Plan.

**c. Alternative 2**

**(1) Neighborhood Parks.** Neighborhood parks would be located on the West Parcel (14 acres divided among three sites: one in the north, one in the center on the east side of the parcel, and one at the southerly tip), the Central Parcel (adjacent to/south of the elementary school), and the West Parcel (on the knoll).

**(2) Community Parks.** A community active use park would be located along Bernal Avenue, divided between the east and west sides of the Village Commercial area.

**(3) Community Natural/Open Space.** Open space in this alternative includes the land along the Arroyo de la Laguna on the West Parcel, the knoll on the East Parcel, and the lakes on the West Parcel and Central Parcel.



**(4) Community Trails.** Like the Cooperative Plan and the Preferred Plan, Alternative 2 accommodates the trails shown in the *Community Trails Master Plan*.

**(5) Regional Open Space.** Alternative 2 provides for the same contribution to regional open space as the Cooperative Plan and Preferred Plan.

#### **d. Alternative 3**

In Alternative 3, the SFWD site would be developed outside the City of Pleasanton. Development on the site would not be subject to the City's park and open space standards, but residents of the site could place demands on the City's park and open space resources. The characteristics of this alternative are discussed in the County EIR, Chapter 4.9.

## **2. Setting**

### **a. City of Pleasanton**

The Pleasanton Parks and Community Services Department provides four types of services: planning of parks and public facilities; maintenance of parks, street trees, street landscaping, and other public areas; recreation programs; and other community services and programs.

**(1) Planning of Parks and Public Facilities.** The Parks and Community Services Department is responsible for assuring that the city provides adequate park lands and recreational facilities for the city's residents and businesses. The city's *Municipal Facilities Master Plan* recommends provision<sup>55</sup> of:

- **Neighborhood parks.** A minimum of two acres per 1,000 residents, with a park within one-half mile of each residence. New parks should have at least four acres of contiguous, level area that is adaptable for active uses. The shape of each park should minimize its perimeter (i.e., it should be more square than elongated). Neighborhood parks provide opportunities for impromptu and informal recreation at the neighborhood level. They usually contain a children's play area, picnic tables, a basketball court, and a turf area large enough for informal "pickup" ball games; they may contain additional facilities such as tennis courts, a parcourse or a backstop.
- **Community active use parks.** A minimum of three acres per 1,000 residents. New parks should provide a minimum of 20 contiguous, level acres that are adaptable for active uses. These parks are intended for group picnic use or other community-oriented recreation and a variety of active and sports uses by individuals and organized groups. Because use for sports is essential, the shape of a park must be able to accommodate multiple sports fields of regulation size with adequate buffers for sideline activity and lighting. Community active use parks usually contain restrooms, group picnic areas and parking, and may contain a community center, aquatics facility, tennis courts, ballfields for organized use, play areas, or facilities for other sports.

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<sup>55</sup> Note that the *Municipal Facilities Master Plan* has not been adopted by the City of Pleasanton; it is used for guidance and recommendation only.

- **Community special use parks.** A minimum of one acre per 1,000 residents. These parks, which serve specific recreation needs, may be of any size and configuration. They include small downtown parks for civic functions and special historic facilities such as Century House and the Senior Center Park.
- **Community nature/open space parks.** A minimum of four acres per 1,000 residents. These areas supplement larger regional parks by providing day camp areas, group picnic areas, interpretation and experiences geared to the specific needs of city residents of all ages.

With a 1995 population of 57,775 (cited in the 1996 Growth Management Plan) and the inventory of 33 existing parks shown in Table 26, Pleasanton currently has 1.9 acres of neighborhood parks per 1,000 residents (including the 5.0 undeveloped acres in Val Vista park), 3.2 acres of community active use parks per 1,000 residents, 0.1 acre of community special use parks per 1,000 residents and 4.1 acres of community open space areas per 1,000 residents. Pleasanton is currently meeting or exceeding its park land goals for community active use parks and community nature/open space parks, but falling short in neighborhood parks and community special use parks.

As shown in the table, existing neighborhood parks range in size from 0.8 acre (Heatherlark) to 13.8 acres (Fairlands); the average size is 5.6 acres, but seven of the neighborhood parks are smaller than the four-acre goal. Community parks range in size from 5 acres (Kottinger Village) to 104 acres (Pleasanton Sports Park); five of the seven facilities are smaller than the 20-acre goal.

In addition to the existing parks listed in Table 26, Pleasanton has several sites for future parks and community open spaces. These sites – most of which are owned by the City and scheduled for improvement during the next several years – are inventoried in Table 27. In addition to the sites shown in that table, the General Plan (Table II-7) shows a 35-acre community park on the SFWD Bernal property.

The department is also responsible for providing other recreational facilities in addition to parks. The two double gymnasiums identified in Table 26, owned and operated in conjunction with the Pleasanton Unified School District, are examples of such facilities.

The city also has an Aquatic Center with three swimming pools, which in 1994 served 4,000 students in learn-to-swim classes, 82 participants on the youth recreational swim team(s), and nearly 31,100 recreational/lap swimmers, as well as various group uses. These participation rates suggest that approximately 46 percent of Pleasanton residents aged 2 through 12 participate in learn-to-swim classes, and 56 percent of all residents use the city pools for recreational swimming. (The number of recreational swimmers shown in this report is equal to the total attendance at recreational swimming programs. It is reasonable to conclude that some individuals are counted multiple times, once for each time they swim. Calculating participation rates in the manner used is nevertheless useful for estimating the amount of additional demand, expressed by the number of swims, that will be placed on city pools as a result of new residential development.)

The City of Pleasanton levies an in-lieu fee on new development to provide the funding required to acquire park land and construct/improve recreational facilities. The fee, which was increased in 1994, is intended to enable the city to provide 5 acres of park land per 1,000 residents, which is the maximum permitted by state law. At its current level, the fee generates sufficient revenue to allow acquisition *or* development of park land, but not both.



**Table 26**  
**Existing Parks and Public Spaces**

Park Name	Location	Acres
<b>Neighborhood Parks (21)</b>		
Del Prado Park	6701 Hansen Drive	5.0
Fairlands Park	W. Las Positas to Gulfstream	13.8
Hansen Park	5697 Black Avenue	6.2
Harvest Park	1401 Harvest Road	1.6
Heatherlark Park	5700 Northway Road	0.8
McKinley Park	519 Kottinger Drive	5.3
Meadowlark Park	8200 Regency Drive	6.0
Meadows Park	3201 W. Las Positas	5.0
Mission Hills Park	600 Junipero	8.6
Moller Park	5500 Pleasant Hill Road	7.9
Nielsen Park	3800 Stoneridge	5.0
Oak Hill Park	7600 Olive Drive	3.9
Orloff Park	1800 Santa Rita Road	8.1
Sutter Gate Park	4801 Sutter Gate	2.7
Tawny Park	400 Tawny Drive	3.9
Valley Trails Park	3400 National Park Road	6.1
Val Vista Park (partly developed)	6701 Payne Drive	10.7
Vintage Hills Park	3301 Arbor Drive	4.0
Walnut Grove Park	5150 Northway Road	3.5
Woodthrush Park	5051 Woodthrush Road	3.5
<i>Subtotal: Neighborhood Parks</i>		<i>111.6</i>
<b>Community Active Use Parks (6)</b>		
Amador Valley	Santa Rita Road/Black Avenue	23.5
Centennial Park	5353 Sunol Boulevard	5.7
Kottinger Village	4100 Vineyard Avenue	5.0
Kottinger Community Park	1000 Kottinger Road	14.5
Muirwood Community Park	4701 Muirwood Drive	14.5
Sports & Rec Community Park	5800 Parkside Drive	104.0
Tennis & Community Park	Hopyard Road/Valley Avenue	15.0
<i>Subtotal: Community Active Use Parks</i>		<i>182.2</i>
<b>Community Special Use Parks (5)</b>		
Bicentennial Park	2401 Santa Rita Road	2.7
Delucchi Park	4501 First Street	0.7
Civic Park	100 Main Street	0.7
Main Street Green	Main Street at Vervais Street	0.4
Veteran's Plaza	550 Peters Avenue	0.5
Wayside Park	4401 First Street	0.7
<i>Subtotal: Community Special Use Parks</i>		<i>5.7</i>
<b>Community Open Space (1)</b>		
Augustin Bernal	8200 Golden Eagle Way	237.0
Ventana Hills	701 Junipero	4.0
Laurel Creek	W. of Foothill Rd., S. of Laurel Ck. Wy. extension	30.9
Bonde Ranch	SE of Bernal Avenue/Independence Dr. intersection	41.0
<i>Subtotal: Community Open Space</i>		<i>312.9</i>
<i>Total Park Acreage</i>		<i>612.0</i>
<b>Gymnasiums (2)</b>		
City/School Gym at Harvest Park Middle School*	4900 Valley Avenue	
City/School Gym at Pleasanton Middle School*	5001 Case Avenue	

\* Operated in conjunction with Pleasanton Unified School District.

Source: City of Pleasanton, 1996 Growth Management Report

**Table 27**  
**Future Parks and Public Spaces**

Park Name	Acres
<b>Parks (5)</b>	
Hacienda	6.6
Amaral	5.0
Arroyo Mocho	2.5
Alviso	6.0
Diablo Vista	7.3
<i>Total Future Park Acreage (Additional)</i>	<i>27.4</i>

Source: City of Pleasanton, 1996 Growth Management Report

As noted in Chapter 5, Part G (“Public Services: Fire Protection”), the City of Pleasanton has adopted a Growth Management Program, which is intended to insure the adequacy of city facilities and services to serve new development as it occurs. This program relies on the regulation of construction phasing/timing and the collection of fees to pay for facilities as they are needed.

**(2) Community Trails.** The City of Pleasanton has adopted a *Community Trails Master Plan*, which describes objectives for the provision of trails and presents a master plan for trails in Pleasanton. Objectives specifically relevant to this EIR include:

- Provide the citizens of Pleasanton with a city-wide network of trails and routes that are, as much as possible, accessible to a variety of users, including, but not limited to, pedestrians, bicyclists, equestrians, and the physically disabled.
  - a. Create a city-wide trails system that promotes safe and convenient linkages to residential neighborhoods, and places of work, shopping, schools, etc.
  - b. Identify recreation and open space linkages and opportunities that would assist in future planning for the City of Pleasanton.
  - c. Provide a safe alternative circulation system with an emphasis on avoiding/minimizing encounters with automobiles whenever possible.
- Provide a document for the City to assist in coordinating the development of a trail and route system with Alameda County, neighboring municipalities, regional agencies, the community, land owners and developers.
  - a. Support multi-use trails along county transportation corridors (the abandoned SPRR right-of-way) with assurances that public transit needs will be accommodated in the future.
  - b. Support and adopt the recommendations of the Alameda County Flood Control and Water Conservation District Zone 7 Arroyo Management Plan, particularly the policies that promote access along selected arroyos, and recommend joint use agreements for trail construction and management.



- c. Encourage and work with the City of San Francisco to provide public access on trail and route corridors through the lands surrounding the Arroyo de la Laguna.

The *Community Trails Master Plan* (p. 11) classifies existing and potential trails according to four types. In the vicinity of the study area, the plan includes Class A, B and C trails. Class A trails are the widest; they are typically multi-use (accessible to all user groups, including equestrians, bicyclists, pedestrians/hikers/joggers) and are generally located along arroyo maintenance roads and abandoned railroad rights-of-way in the developed, urban core area. Class B trails serve as intermediate connectors to Class A routes; they are frequently narrower, and may be restricted to pedestrians (on sidewalks) and/or bicyclists (using painted lanes in the roadway) in urban or developed areas. Class C routes form the basic network of *Master Plan* routes and trails, and will ultimately connect the entire community with a relatively safe, contiguous, easily identified system. These routes are similar to Class B routes; that is, with pedestrians on the sidewalk and bicyclists on separate lanes in the street.

The following proposed trails are described by the *Community Trails Master Plan* in the vicinity of the study area:

- Alamo Canal/Arroyo de la Laguna (Class A trail): I-580 to Alameda County transportation corridor (4.8 miles). This trail begins at I-580 and follows the Zone 7 maintenance road that parallels the eastern bank of the Alamo Canal and the Arroyo de la Laguna. South of the Bernal Avenue bridge over the arroyo, the proposed trail parallels the arroyo on lands owned by the City of San Francisco. The trail leaves the arroyo, turning east-northeast at the southern end of the San Francisco property.
- SPRR Right-of-Way (Class A trail): This trail passes through historic downtown Pleasanton, either on the Alameda County transportation corridor (formerly the Southern Pacific Railroad right-of-way) or on an alternate alignment, then follows the SPRR southerly of the downtown, alongside of the study area and as far south as the community of Sunol.
- Western bank of the Arroyo de la Laguna north of the Bernal Avenue bridge (Class B trail): this trail is north of, but close to, the study area.
- Class C trails: These trails would be located throughout the city. The Trails Plan map in the *Community Trails Master Plan* shows community trails in the West Parcel along the south side of Bernal Avenue, and in the Central Parcel along the south side of Bernal Avenue, along Valley Avenue, and along the west side of the UPRR right-of-way.

The *Master Plan* specifies that the Department of Parks and Community Services is responsible for the detailed planning, acquisition and development, and management of trails within its jurisdiction.

**(3) Maintenance.** The department is responsible for maintaining all city parks, street medians, street trees and landscaping of public buildings. The City's 33 parks and public spaces are inventoried in Table 26. The city also shares two double gymnasiums, located at the two middle schools, with the Pleasanton Unified School District; they are maintained by the school district, but the City shares the cost of maintenance.

**(4) Recreational Services.** Recreational services provided by the department include classes, sports programs and preschool. Classes and sports programs are provided on a fee-for-service, full cost recovery basis and are open to residents and non-residents. (Non-residents pay a higher fee to participate.) The department also facilitates the programs of all the youth and adult sport organizations, such as Little

League, youth soccer, and girls' softball. Youth and adult co-sponsored sport groups are provided access to City fields at no cost. The Winter 1994-95 catalog offered nearly 100 classes, many of which have multiple sections (there were no fewer than 40 aerobic-type exercise sections, for example) in addition to family and teen excursions, workshops, sports leagues, tennis and swimming lessons, and other activities.

**(5) Other Services.** The department also facilitates or provides a variety of services that are not directly related to physical recreation. These services include civic arts programs (including live theater, films, musical programs and community arts projects), day camps during the summer and school breaks, and services for seniors (including an adult day center, a daily luncheon program, case management, and paratransit).

The department also administers two contracts for services. One provides case management and home living assistance to seniors. The other provides assistance to small and large in-home child care providers, child care references, and direct services to those providing child care to improve the quality of care.

#### **b. East Bay Regional Park District**

The East Bay Regional Park District (EBRPD) is responsible for providing and operating regional park facilities in Alameda and Contra Costa Counties. The EBRPD is funded through property taxes and bond measures.

The EBRPD *Master Plan-1989* describes resource policies, which provide guidelines for the "protection, enhancement, utilization, and management" of vegetation, habitat, wildlife, endangered species, fisheries, water, soil, historic and cultural resources, energy resources, and wetlands; recreational policies, which guide the District's approach to providing "a system of regional parklands and regional trails that will emphasize a variety of significant outdoor recreational and educational activities"; and educational policies, which focus on nature education and interpretation.

The *Master Plan-1989* adopts a goal for parkland distribution that would distribute lands among three areas – the West Metropolitan section, the Diablo section, and the South Metropolitan section – in approximate proportion to their population. Pleasanton is located in the South Metropolitan section, which was expected (as of the date of the *Master Plan*) to have 31 percent of EBRPD's population in 1990.

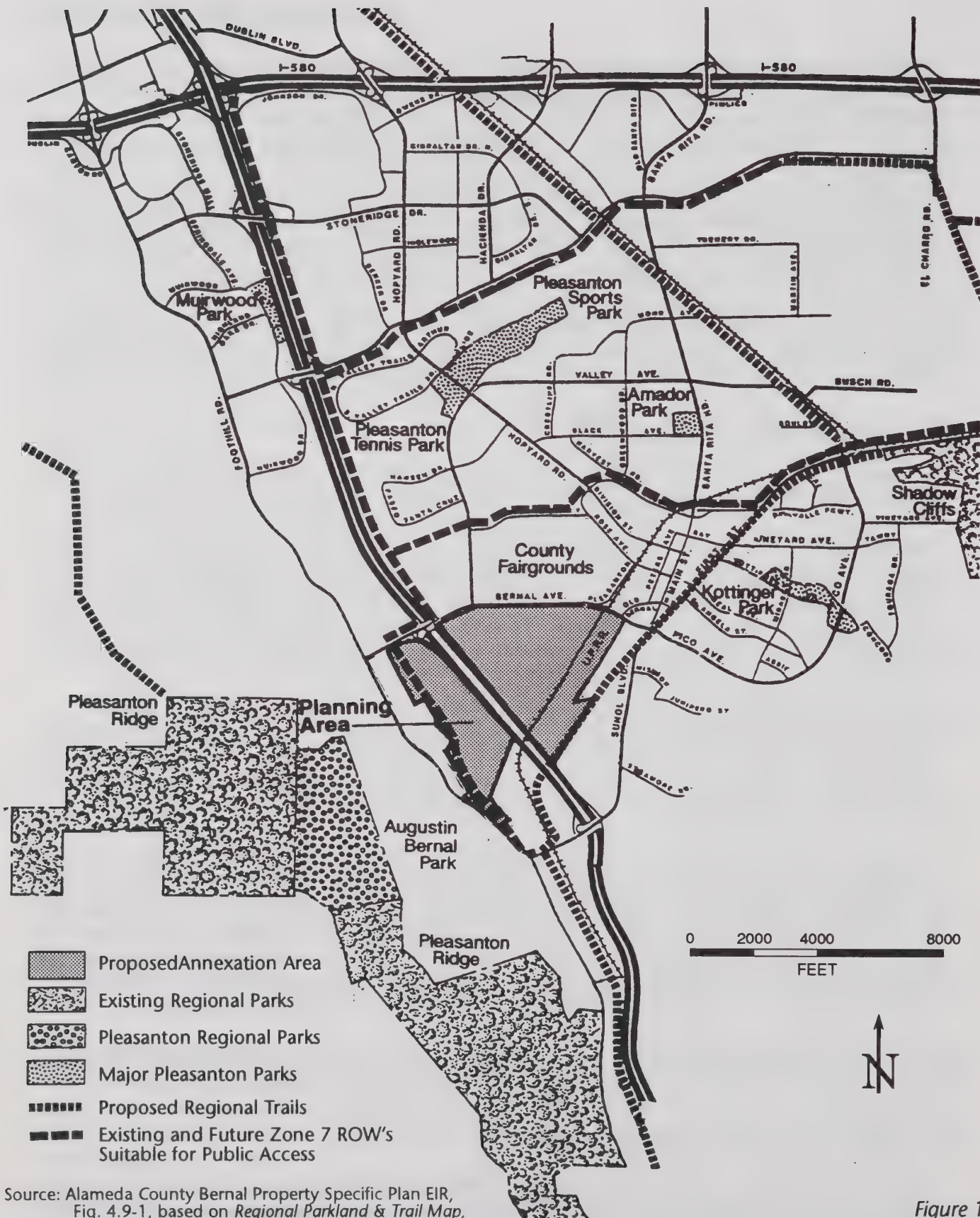
The *Master Plan-1989* classifies regional parklands into the following categories: open space, park, preserve, recreation area, shoreline, trail, wilderness, and land bank. Existing facilities in the greater Pleasanton area include Pleasanton Ridge Regional Park, Shadow Cliffs Regional Recreation Area, Mission Peak Regional Preserve, Sunol Regional Wilderness Area, Ohlone Regional Wilderness Area and Del Valle Regional Park. The *Master Plan* identifies a potential regional trail between Fremont and Shadow Cliffs, via Sunol and Pleasanton (along the route of the Alameda County transportation corridor in the vicinity of the study area).

Existing EBRPD regional parks in the vicinity of the Project, shown in Figure 19, include Pleasanton Ridge (1,771 acres) and Shadow Cliffs (249 acres) parks.

#### **c. Other Park and Recreational Facilities**

**(1) County Facilities.** The Alameda County Fairgrounds (260 acres) is a County-owned facility, located directly north of the Project. Recreation uses at the fairgrounds include the annual County Fair, a miniature golf course, a nine-hole golf course and driving range, and exhibition facilities.





Source: Alameda County Bernal Property Specific Plan EIR, Fig. 4.9-1, based on *Regional Parkland & Trail Map*, EBRD 1989 *Existing Recreation Facilities*, City of Pleasanton, 1990 *Trail Master Plan*, Zone 7 Alameda Co. FCWCD 1985

Figure 19  
**Existing and Proposed  
Major Recreation Facilities**

**(2) Regional Trails.** The East County Area Plan (ECAP) identifies proposed regional trail routes in the East County Area. One of the proposed regional trail routes would run between Del Valle Regional Park and Shadow Cliffs Regional Park and would continue along the County transportation corridor. Figure 19 shows the proposed regional trails in the vicinity of the Project area.

**(3) Zone 7 Arroyo Management Plan.** In 1985, Zone 7 of the Alameda County Flood Control and Water Conservation District adopted the Arroyo Management Plan, which provides for public recreational access along the flood channels and arroyos under its control. The Arroyo Management Plan includes a Trails Master Plan that identifies existing, future, and potential trails along the arroyos within the Zone 7 district. Zone 7 acts as the coordinating agency for the Trails Master Plan, but has allocated responsibility for its implementation to EBRPD.<sup>56</sup>

### **3. Impacts**

#### **a. Impacts of the Cooperative Plan and the Preferred Plan**

Development of residential uses on the site according to either the Cooperative Plan or the Preferred Plan would increase the demand for park and recreational resources. Impacts could affect (1) regional parks trails, (2) community trails, and (3) neighborhood and community parks and recreation facilities.

**(1) Neighborhood and Community Parks and Recreation Facilities.** Two aspects of neighborhood and community park provision must be considered: (a) the amount of park land provided and (b) the location and configuration of new facilities. The acreage recommendations outlined above (pp. 142-143) are treated as goals, to be achieved wherever possible; the standards for facilities and types of use to be accommodated always apply.

**(a) Amount of Park Land Provided.** Both the Cooperative Plan and the Preferred Plan would accommodate a maximum of 1,900 housing units. For this analysis, it is assumed that 1,520 of these units are single family homes (medium density) and 380 are in multiple-family structures (high density). Using the average household size estimates reported in Pleasanton's 1996 Growth Management Report Update, full development of the site would accommodate an estimated 5,480 new residents.<sup>57</sup> To satisfy the city's goals for this population would require 11.0 acres of neighborhood parks, 16.4 acres of community active use parks, 5.5 acres of community special use parks and 21.9 acres of community open space. These goals are summarized in Table 28.

Table 28 also compares the amount of park land provided in the Cooperative Plan and the Preferred Plan (initially summarized in Table 26) to the amount that would be needed to meet the recommendations summarized on pp. 142-143. The table indicates that the Cooperative Plan with 1,900 housing units would fall one acre short of the City's acreage goals, while all other scenarios (Cooperative Plan with 1,600 units and Preferred Plan with either 1,600 or 1,900 units would achieve the goals.

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<sup>56</sup> *Arroyo Management Plan*, Kent Watson, 1985.

<sup>57</sup> Population estimate based on an average of 3.09 persons per household in 1,520 single family units and 2.05 persons per household in 380 multiple family units.



**Table 28**  
**Comparison of Park Land Recommendations and Provisions:**  
**Cooperative Plan and Preferred Plan**

Type of Park	Acres/ 1,000 Residents	Total Acres Recommended		Total Acres Included	
		1,600 Unit Project	1,900 Unit Project	Cooperative Plan	Preferred Plan
<i>Estimated Population:</i>		4,550	5,480	5,480	5,480
Neighborhood	2	9.1	11.0	10.0	16.0
Community Active Use	3	13.7	16.4	20.0	20.0
Community Special Use	1	4.6	5.5	157.0	169.8
<i>Golf Course</i>				157.0	168.2
<i>Other (Village Green)</i>				0.0	1.6
Community Natural/Open Space	4	18.2	21.9	35.0	44.1
<b>Total</b>		45.5	54.8	222.0	249.9

Source: City of Pleasanton, *Municipal Facilities Master Plan*, 1990; Mundie & Associates

The knoll would be retained as passive open space in both the Cooperative Plan and the Preferred Plan, and therefore would not provide any of the active uses that are typically provided in neighborhood parks. For this reason, it is counted as open space rather than park land, and is excluded from the calculation of park acreage.

City policy is to recognize that portions of community parks also serve the functions of neighborhood parks. Because the total amount of neighborhood plus community park land in the Cooperative Plan satisfies the City's acreage goals, the apparent shortage of one acre of land in neighborhood parks is not considered a significant adverse impact.

Although both the Cooperative Plan and the Preferred Plan meet the City's population-based acreage goals for community park land, they do not conform to the General Plan, which calls for a 35-acre community park on the Bernal Property. The scarcity of land in Pleasanton that is suitable for community parks – given their distinct locational and topographic requirements from those of neighborhood parks – makes it a priority that a community park of the maximum size possible be included in any plan for the Bernal site.

<p><b>Impact H1. Potential for interference with the location of a 35-acre community park on the Bernal property.</b></p> <p>In both the Cooperative Plan and the Preferred Plan, the community park is only 20 acres.</p>
--

(b) *Location and Configuration of New Park Facilities.* The goals cited at the beginning of this section seek a neighborhood park within one-half mile of each residence in Pleasanton. The critical distance is measured "as the crow flies," with no adjustment for travel routes.

In the Cooperative Plan, all residential areas of the site are within one-half mile of one of the neighborhood parks, meeting the City of Pleasanton standards. Residences on the southern part of the West Parcel, however, are beyond one-half mile from the park on the West Parcel, and instead are closest to the neighborhood park adjacent to the elementary school. The extension of Pleasanton Avenue under I-680 would provide access to this park

from the West Parcel. Similarly, the residences in the western portion of the Central Parcel (near the Village Center) are more than one-half mile from the community park in the Central Parcel. These homes are within three-fourths mile of the community park (with easy access via Golf Course Drive), and within one-half mile of the neighborhood park in the West Parcel. The park on the West Parcel is long and narrow, and not obviously configured in a shape that would make it susceptible to recreational uses.

In the Preferred Plan, the neighborhood parks large enough to meet City acreage standards may be beyond the target one-half mile distance from all residences. Smaller neighborhood parks of one to two acres in size in the southern portion of the West Parcel bring parks within approximately one-half mile of all residential areas on the site, but these smaller sites are inconsistent with the City's standard of at least four acres, and would not provide the range of recreational opportunities for development of children's motor skills that the City considers essential for useful parks.

**Impact H2. Potential for inappropriately-located, -sized, or -configured neighborhood parks.**

In the Cooperative Plan, the neighborhood park on the West Parcel may be inappropriately configured for recreational use.

In the Preferred Plan, some residences are farther than one-half mile from neighborhood parks that conform to the City's four-acre minimum size standard and/or the square shape configuration. Several parks are smaller than the minimum size standard, and therefore do not provide the desired range of recreation opportunities within one-half mile of all residential locations.

**(2) *Community Trails.*** As noted in the "Characteristics of the Project" section, above, both the Cooperative Plan and the Preferred Plan are designed to accommodate trails included in the *Community Trails Master Plan*. Therefore, neither plan would have an adverse impact on community trails.

**(3) *Regional Parks and Trails.*** According to the EIR on the Pleasanton General Plan Update (citation in Chapter 9), population growth accommodated by the General Plan would not have a significant impact on non-City park and recreational facilities over the time horizon of that plan. Both the Cooperative Plan and the Preferred Plan would permit less development than was assumed for the project site in the General Plan; therefore, the project would not have a significant impact on regional park and recreation facilities.

If the extension of Valley Avenue across the Alameda County transportation corridor (Cooperative Plan only) is at grade rather than as an overcrossing or undercrossing, it would create a potential obstacle to use of a future regional Niles Canyon-to-Shadow Cliffs trail. In addition, land uses could be introduced that are potentially incompatible with trail uses, such as residential back yards adjacent to a trail corridor.

**Impact H3. Potential incompatibility with regional trail (Cooperative Plan).**

**b. Impacts of Alternative 2**

In general, the impacts of Alternative 2 on parks and recreational facilities would be similar to those of the Cooperative Plan and the Preferred Plan, because the population of Alternative 2 is expected to be the same as the population of the other two plans.



**(1) Neighborhood and Community Parks and Recreation Facilities.** As with the Cooperative Plan and the Preferred Plan, Alternative 2 could have impacts related to (a) the location and configuration of new facilities and (b) the amount of park land provided.

***(a) Amount of Park Land Provided.*** As shown in Table 29, the amount of park and open space land provided in this alternative satisfies the City's requirements (the 5.5-acre deficit in the Community Special Use category is offset by the excess lands in other categories).

**Table 29**  
**Comparison of Park Land Recommendations and Provisions:**  
**Alternative 2**

Type of Park	Acres/ 1000 Residents	Total Acres Recommended		Total Acres Included
		1,600 Unit Residents	1,900 Unit Project	
Neighborhood	2	9.1	11.0	24.6
Community Active Use	3	13.7	16.4	21.9
Community Special Use	1	4.6	5.5	0.0
Community Natural/Open Space	4	18.2	21.9	163.1
Lake				88.5
Other				74.6
Total		45.5	54.8	209.6

Source: City of Pleasanton, *Municipal Facilities Master Plan*, 1990; Mundie & Associates

Like the Cooperative Plan and the Preferred Plan, Alternative 2 provides a community park that is larger than required by the City's population-based standard but smaller than the 35-acre park included in the General Plan.

**Impact H1. Potential for interference with the location of a 35-acre community park on the Bernal property.**

Same as for the Cooperative Plan and the Preferred Plan.

***(b) Location and Configuration of New Park Facilities.*** In Alternative 2, neighborhood parks would be located on the West Parcel (14 acres divided among three sites: one in the north, one in the center on the east side of the parcel, and one at the southerly tip), the Central Parcel (adjacent to/south of the elementary school), and the West Parcel (on the knoll); in addition, a community park would be divided between two sites – one on either side of the commercial area – at the north of the Central Parcel. The neighborhood park and community park sites on the Central Parcel appear to be suitable for informal and active recreation uses. Division of the park acreage on the West Parcel among three sites necessarily means that at least one of these sites will encompass less than four acres, which is the City's minimum desirable site size for a neighborhood park.

**Impact H2.** Potential for inappropriately-located, -sized, or -configured neighborhood parks.  
Same as for the Cooperative Plan and the Preferred Plan.

**(2) Community Trails.** Impacts would be the same as with the Cooperative Plan and the Preferred Plan.

**Impact H3.** Increased demand for community trails.  
Same as for the Cooperative Plan and the Preferred Plan.

**(3) Regional Parks and Trails.** Like the Cooperative Plan and the Preferred Plan, Alternative 2 would have no adverse impact on regional parks and trails.

**c. Impacts of Alternative 3**

The impacts of Alternative 3 are discussed in the County EIR, Chapter 4.9.

**4. Mitigation Measures**

**Impact H1.** Potential for interference with the location of a 35-acre community park on the Bernal property.

**Measure H1.** Provide an option for the City to expand the 20-acre community park to up to 35 acres, as provided by the General Plan, in a contiguous, appropriately-configured parcel.

**Impact H2.** Potential for inappropriately-located, -sized, or -configured neighborhood parks.

**Measure H2a.** Assure that neighborhood parks, or neighborhood park-type improvements in community parks, are located within one-half mile of all residential areas.

Prior to the approval of a specific plan for the study area, assure that the location of parks conforms to city standards and requirements.

**Measure H2b.** Provide neighborhood parks of satisfactory size and shape unless the City finds that alternative, smaller parks satisfy its requirements for meeting neighborhood park needs.



**Impact H3. Potential incompatibility with regional trail (Cooperative Plan).**

**Measure H3. Prior to approval, refine the specific plan to minimize conflicts between residential development and trails.**

Refinements should pay particular attention to minimizing rear yard configurations adjacent to trail corridors, by either modifying land uses adjoining the trail corridor, configuring residential uses to avoid rear yard back-up configuration, implementing a grade separation between the trail and the residential lots, or adopting special fencing criteria designed to minimize privacy, nuisance, and other issues.

In addition, the Valley Avenue Extension across the transportation corridor (Cooperative Plan) should either be grade-separated from the rail right-of-way or should have traffic controls to provide for pedestrian safety when the trail becomes available for public use.

Implementation of Measures H1 through H3 would mitigate the impacts of development permitted by the Cooperative Plan or the Preferred Plan on Parks and Community Services to a less-than-significant level.

**5. Summary Comparison of Impacts and Mitigated Impacts:  
Parks and Community Services**

	<b>Cooperative Plan</b>	<b>Preferred Plan (Alternative 1)</b>
<b>Impact H1.</b> <b>Potential for interference with the location of a 35-acre community park on the Bernal property.</b>	S/LS	S/LS
<b>Impact H2.</b> <b>Potential for inappropriately-located, -sized, or -configured neighborhood parks.</b>	S/LS	S/LS
<b>Impact H3.</b> <b>Potential incompatibility with regional trail.</b>	S/LS	n.a.

Key: \*/\*: significance before mitigation/significance after mitigation.

S: significant

(C): contributes to cumulative impact

LS: less than significant

n.a.: impact does not apply to this alternative

\* no mitigation required

ND: not determinable

† Less than significant before mitigation, but contributes to cumulatively significant impact.

NM: no mitigation possible (beyond policies, programs, and other regulations already in place).

## **I. LIBRARY FACILITIES**

Impacts on library use are not cited by CEQA (Appendix G) as normally significant effects of a project. Significant impacts may occur, however, if the additional population accommodated by buildout of the General Plan causes the need for expansion of the existing library building or construction of a branch library, which in turn could create physical impacts on the environment. Specific library construction projects would themselves be subject to CEQA review as they are proposed.

The EIR on the 1996 Pleasanton General Plan, which considered alternatives that would accommodate population growth of more than 20,000 residents, concluded that buildout of the plan would have no adverse impact on library facilities. The Cooperative Plan, Preferred Plan, and Alternative 2 would accommodate an estimated 5,480 new residents, or less than one-third of the maximum number included in the General Plan analysis; further, these three alternatives would permit less development than the amount assumed in the General Plan EIR. For these reasons, no impact on library facilities is expected as a result of this project.



## J. TRANSPORTATION AND CIRCULATION

Fehr & Peers Associates, Inc. conducted the traffic analysis for this EIR. The analysis is based in large part on traffic projections provided by TJKM in their letter report to the City of Pleasanton (on file in the Planning Department). Local road improvement assumptions, identified in the TJKM document, correspond with the Pleasanton General Plan. Freeway-related impacts are based on previous work described in the Alameda County EIR for the Bernal Property Specific Plan ("County EIR").

### 1. Project Transportation Characteristics

#### a. Circulation Characteristics

**(1) Cooperative Plan.** The circulation system for the Cooperative Plan, illustrated in Figure 20, includes a hierarchical circulation system of arterials, collectors, and local roads designed to meet City standards. Road improvements related to the project site that affect existing roads are:

- *Valley Avenue*, which would be extended from Bernal Avenue through the site. The *Valley Avenue Extension* is the segment of this road that would provide access from the Central Parcel to the East Parcel, across the Union Pacific Railroad (UPRR) tracks (an overpass is proposed), and could be extended to a signalized intersection at Sunol Boulevard with Sycamore Road in the future. At its intersection with Bernal Avenue, Valley Avenue would have two northbound left-turn lanes, a through lane, and a right-turn lane, and one southbound through lane. The project applicant would also provide a right-turn-only lane on the eastbound approach from Bernal Avenue and a left-turn-only lane on the westbound approach from Bernal Avenue.
- *Case Avenue Extension* from its existing southern end at Junipero Street to the new Valley Avenue Extension.
- "*Pleasanton Avenue*" Extension from Bernal Avenue to Valley Avenue Extension. Pleasanton Avenue would be further extended to the west side of I-680 and would loop north to a signalized intersection at Bernal Avenue with Meadowlark Drive. Its intersection with Bernal Avenue in the Central Parcel would be offset from (west of) the existing Pleasanton Avenue T-intersection and signalized; the existing Pleasanton Avenue intersection would not be signalized.
- *A signalized intersection* on Bernal Avenue east of I-680 midway between Valley Avenue and Pleasanton Avenue.
- *A new signal* on Bernal Avenue at the I-680 southbound (SB) ramp junction. If the intersection of Bernal Avenue with the I-680 northbound (NB) ramp junction is not signalized by the time this project begins development, the project will signalize that intersection as well.

The commercial parcels on the project site, which are located on the Central Parcel along the south side of Bernal Avenue, generally have access to Bernal Avenue and an onsite arterial loop road. Residential areas on the Central Parcel back against the loop road and have frontage on either a collector or local road. Access to the East Parcel is provided via Case Avenue and Junipero Street from the east and the Valley Avenue Extension from the west. Access to the West Parcel is provided from Bernal Avenue via an access road opposite Meadowlark Drive and from the Central Parcel via the Pleasanton Avenue Extension west of Valley Avenue.

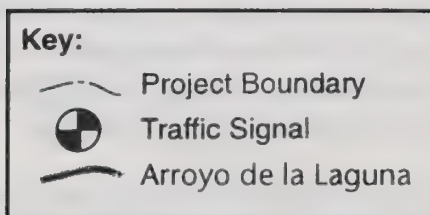
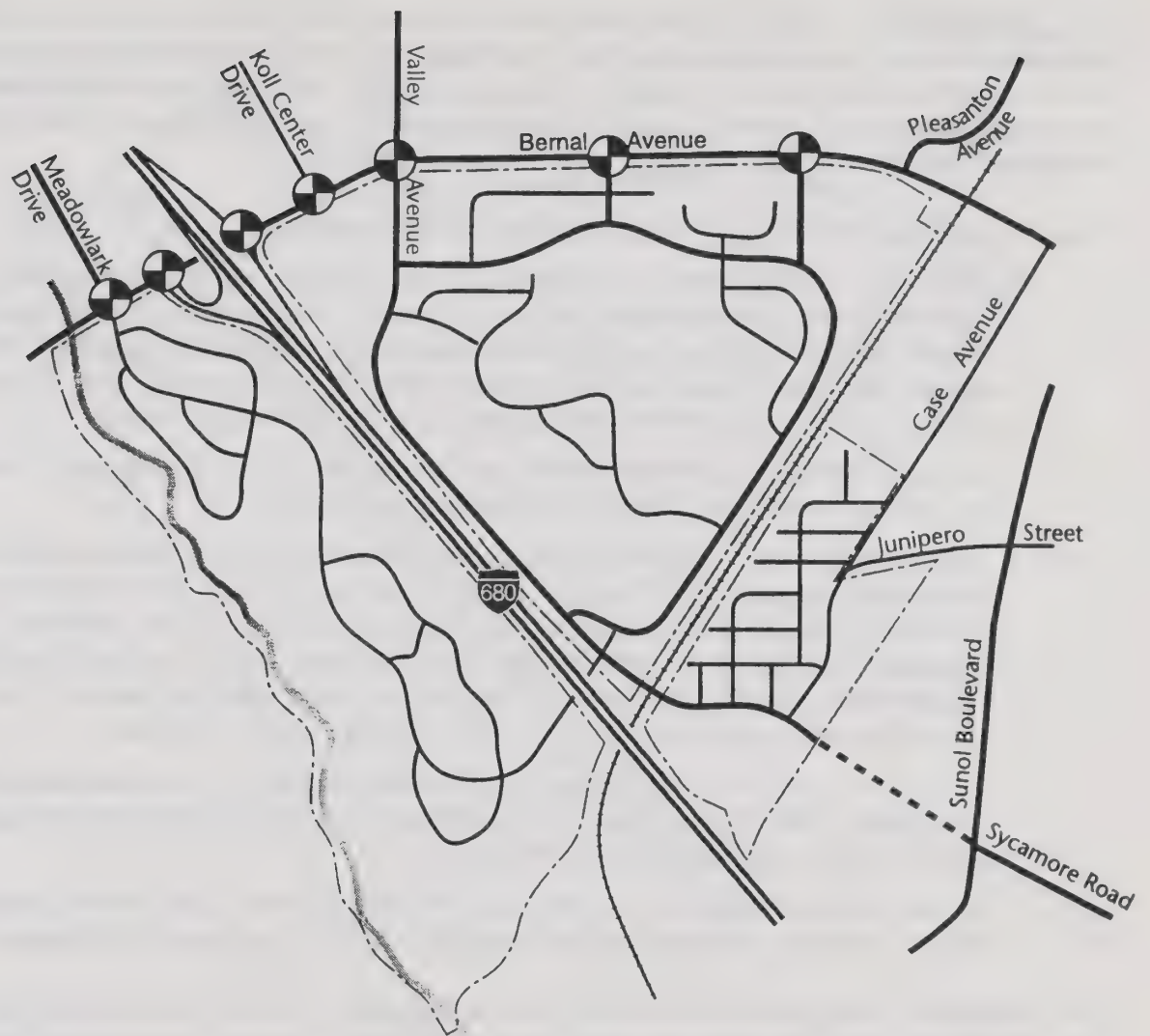


Figure 20  
**Proposed Project  
Circulation Plan**



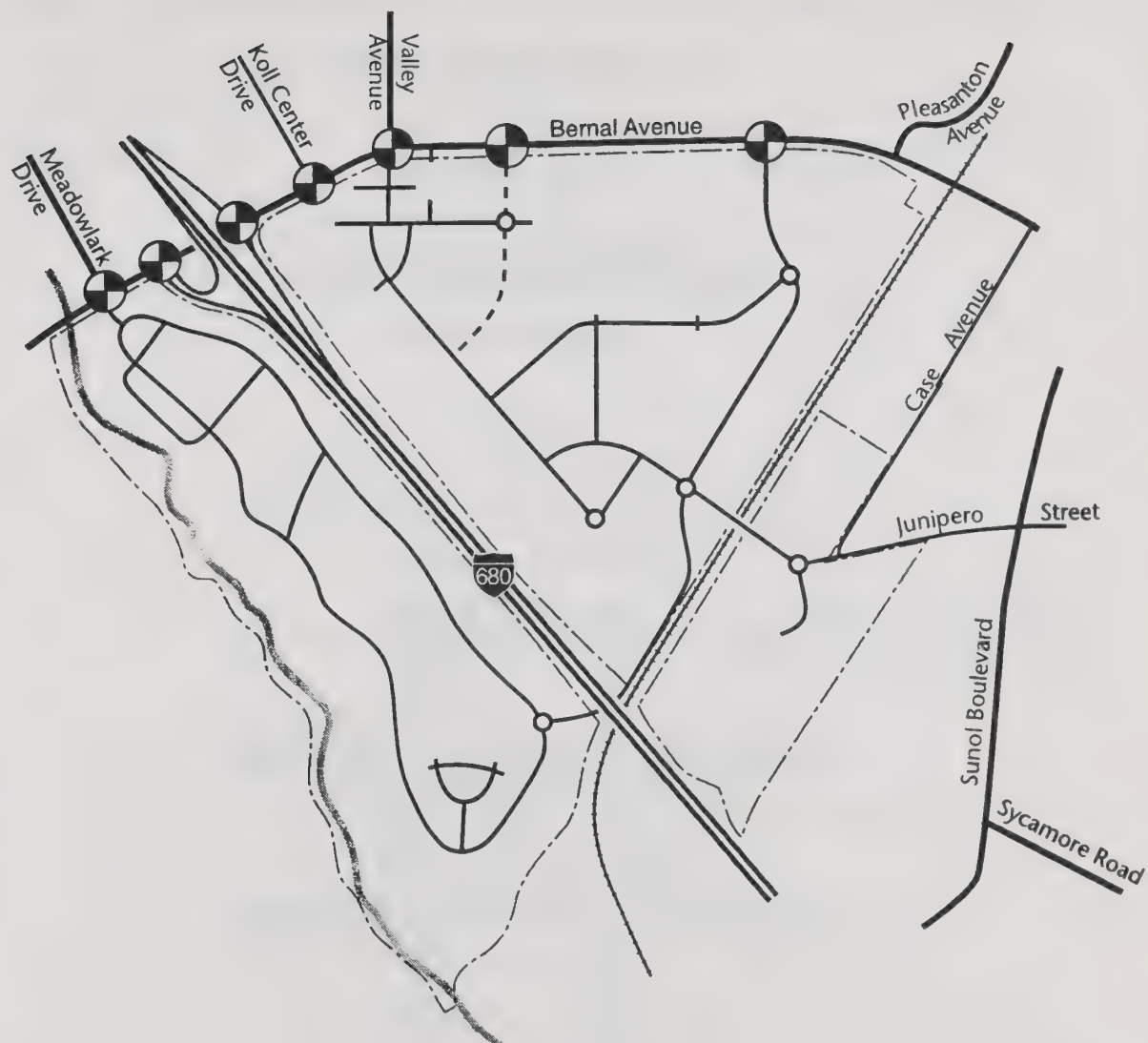
**(2) Preferred Plan.** The circulation system for the Preferred Plan, illustrated in Figure 21, includes street design standards that were modified through public workshops and consequently differ from those typically used in Pleasanton. They are illustrated in Figure 22. This alternative also uses roundabouts at six intersections on the primary circulation system and traffic circles at neighborhood street connections. Figure 23 illustrates the typical roundabout cross section and the typical layout for residential traffic circles.

Road improvements for the Preferred Plan that affect existing roads are:






- *Valley Avenue*, which would be extended from Bernal Avenue into the project site, ending at the golf course clubhouse. At its intersection with Bernal Avenue, Valley Avenue would have two northbound left-turn lanes, a through lane, and a right-turn lane, and one southbound through lane. The eastbound approach on Bernal Avenue would be improved to provide a right-turn-only lane, and the westbound approach on Bernal Avenue would be improved to provide a left-turn-only lane.
- *Junipero Street Extension* from Case Avenue into the project site to the extended Valley Avenue. This extension would cross the UPRR tracks as an underpass.
- *"Pleasanton Avenue" Extension* from Bernal Avenue to the new Junipero Street Extension. Pleasanton Avenue would be further extended to the west side of I-680 and would connect to a road that loops north to a signalized intersection at Bernal Avenue with Meadowlark Drive. Its intersection with Bernal Avenue would be offset from (west of) the existing Pleasanton Avenue T-intersection; a traffic signal would be installed to provide signalized access to the Pleasanton Avenue Extension within the project, but not to existing Pleasanton Avenue.
- *A new signal* on Bernal Avenue at the I-680 SB ramp junction. If the intersection of Bernal Avenue with the I-680 NB ramp junction is not signalized by the time this project begins development, the project will signalize that intersection as well.
- *Two site access driveways at Bernal Avenue*, on either side of Valley Avenue, providing right-turn-only access to and right-turn-only egress from the site's commercial development.

The commercial development on the Central Parcel is accessible via right turns at driveways on Bernal Avenue and at the Valley Avenue intersection with Bernal Avenue. Access to the residential neighborhoods is provided through the commercial development, around the Village Green, and from the Pleasanton Avenue Extension. Most of the residential area is surrounded by the golf course. The East Parcel may be entered via Junipero Street, which provides access from the east, and via Case Avenue, which provides access from the north. A single connector road (identified as Junipero Street Extension) crosses the UPRR right-of-way to join the Central and East Parcels. Neighborhood streets intersect with the connector road, providing access to residential units. The West Parcel includes a connector road loop, extending from the Pleasanton Avenue Extension from the Central Parcel in the south to Bernal Avenue in the north.

Figure 21 shows a supplemental route around the Village Green (on the east). This route was used in modeling the levels of service shown in Tables 34, 35, 38, and 39. As noted in the discussion of the Preferred Plan impacts (p. 181), this street would connect with the extended Valley Avenue south of the Village Green, and would provide an alternate route for residential traffic that bypasses the Village Green.



**Key:**

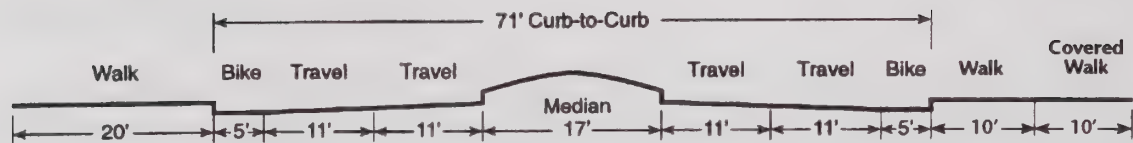
-  Project Boundary
-  Traffic Signal
-  Roundabout
-  Arroyo de la Laguna
-  Revision to street system used for modeling LOS in Tables 34 and 35



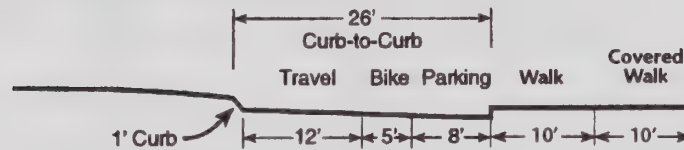
Not to Scale

Figure 21  
**Alternative 1  
 Circulation Plan**

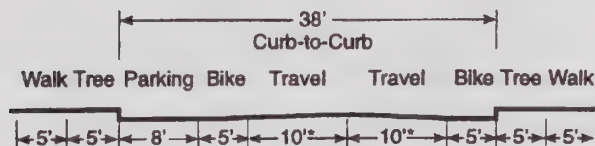




Valley Avenue south of Bernal  
Village Entry

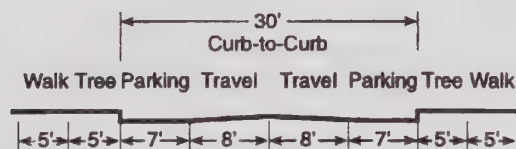


Village Green Loop

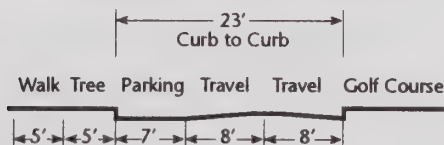


\* Reduced to 9' in Residential Areas

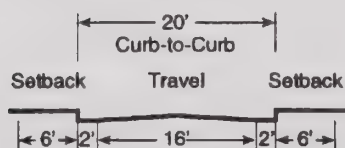
Connector Street  
(Valley Avenue and Pleasanton Avenue)



Neighborhood Street



Neighborhood Street  
Next to Golf Course

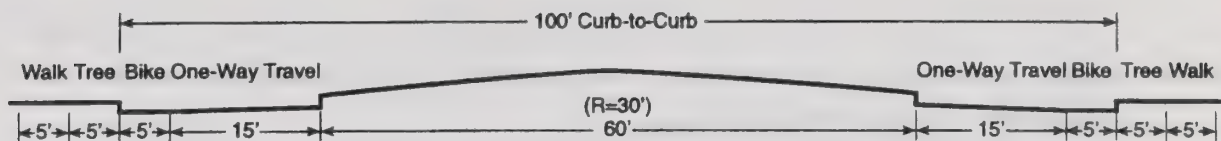


Residential Alley

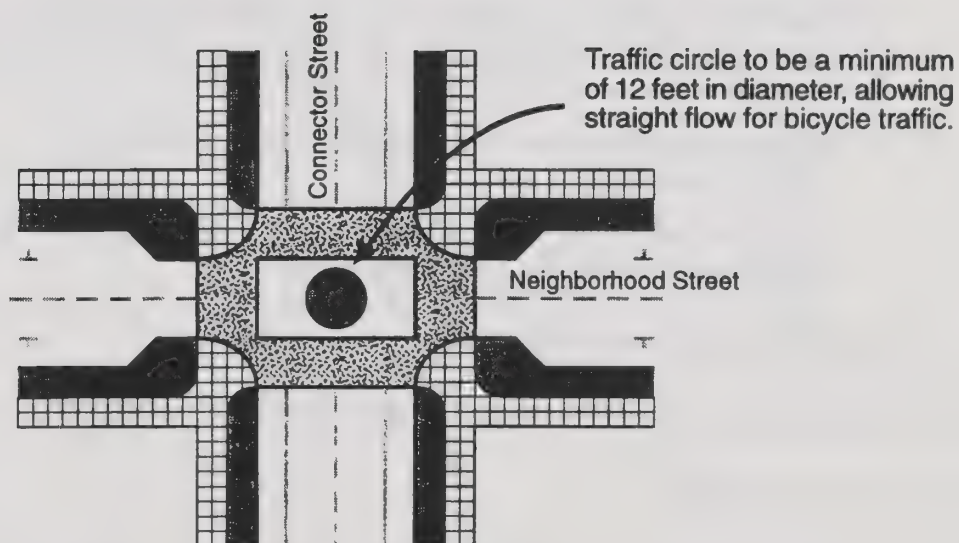
Figure 22

## Typical Street Cross Sections for Alternative 1

Source: [Revised] Draft Design Guidelines  
February 24, 1997



Roundabout Cross Section  
Used at Connector Street Intersections



Traffic Circle  
(Used at Neighborhood Street Intersections)

Figure 23  
Typical Intersection  
Calming Devices

Source: [Revised] Draft Design Guidelines, February 24, 1997



**(3) Alternative 2.** Alternative 2 has the following access and circulation characteristics:

- *Valley Avenue* is extended from Bernal Avenue through the project. Its route is circuitous because of numerous internal intersections, including two roundabouts. At the Valley Avenue/Bernal Avenue intersection, both streets would have the same configuration as in the Cooperative Plan and the Preferred Plan.
- *Case Avenue Extension* from its existing southern end at Junipero Street would continue south; it could connect to Sunol Boulevard in the future.
- *Pleasanton Avenue* would not be extended through the site. It would, however, provide access from Bernal Avenue to an east-west collector road that connects to Valley Avenue. The intersection with Bernal Avenue would be signalized.
- On the West Parcel, there would be a loop north to a signalized intersection at Bernal Avenue with Meadowlark Drive. This loop road would also extend east under I-680 and connect with the internal circulation system on the Central Parcel. This arrangement is similar to the Preferred Plan.
- In addition to the new signalized access to the site at Bernal Avenue midway between Valley Avenue and Pleasanton Avenue, the site would be accessible via right turns at several locations along Bernal Avenue.
- The street network in the Central Parcel would be a grid system of intersecting streets with an outer loop road around a lake.
- A new signal on Bernal Avenue at the I-680 SB ramp junction (and, if it is not already signalized, at the Bernal Avenue/I-680 NB ramp junction).

Figure 24 illustrates the proposed circulation system for Alternative 2.

**(4) Alternative 3.** Alternative 3 is described in the County EIR, June 1996, Chapter 4.2.

**b. Trip Generation**

The City of Pleasanton has developed a standard traffic study methodology for development proposals submitted to the City. The methodology includes use of City-adopted traffic data and assumptions. As part of a continuing effort to update and refine these assumptions, the City annually monitors traffic conditions throughout Pleasanton to establish a “base case” from which future traffic projections can be made. The resulting information is summarized in the report Annual Traffic Counts for Baseline 1996 in the City of Pleasanton and is on file at the Planning Department.

Project trip generation for the project and alternatives is summarized in Table 30. The PM peak hour trip generation ranges from a low of 3,404 peak hour trips for Alternative 2 to a high of 5,200 trips for Alternative 3.

**c. Project Trip Distribution and Assignment**

Project-related trip distribution and assignment are based on model input assumptions. These assumptions are based, in part, on annual Transportation Systems Management (TSM) Employee Survey results. A complete discussion of the trip distribution and assignment process is presented in Traffic Counts for Baseline 1996 for the City of Pleasanton.

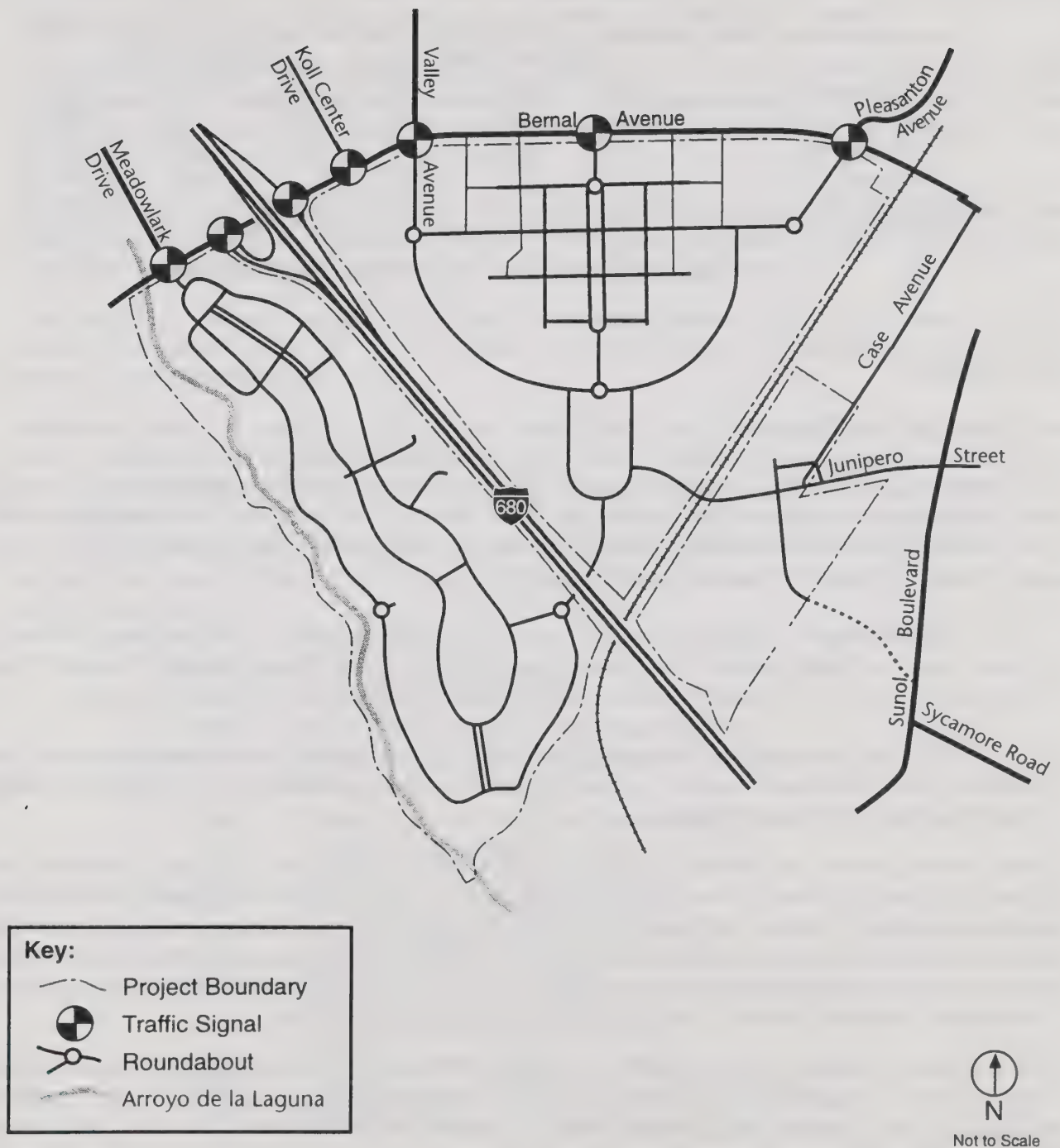


Figure 24  
**Alternative 2**  
**Circulation Plan**



**Table 30**  
**Project Site Trip Generation**

Alternative	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Cooperative Plan	1,171	1,302	2,473	1,973	1,507	3,480
Preferred Plan	1,269	1,331	2,600	1,944	1,520	3,464
Alternative 2	1,221	1,321	2,542	1,913	1,491	3,404
Alternative 3	1,441	1,900	3,341	3,027	2,173	5,200

Source: TJKM. Letter Report to City of Pleasanton, March 13, 1997

## **2. Setting**

### **a. Existing Conditions**

**(1) Regional and Local Access.** The project study area and the analysis locations include a total of eight offsite intersections plus the four freeway on- and offramps at the Bernal and Sunol interchanges with Interstate 680 (I-680). An evaluation of the project impacts on the freeway was conducted for the County EIR. No additional analysis was conducted for this study.

**(a) Road Network.** Regional access to the site is provided by I-680. Local roadways included in the study area are Bernal Avenue, Old Bernal Avenue/Case Avenue, Valley Avenue, Junipero Street, Sycamore Road, Sunol Boulevard, Foothill Road, Main Street, First Street, and Pleasanton Avenue.

*Interstate 680 (I-680)* extends through the project site as a six-lane freeway, in a north-south direction from I-280 in San Jose to I-80 near Vacaville. Access to I-680 from the project site is provided via interchanges at Sunol Boulevard and Bernal Avenue.

*Bernal Avenue* extends from Foothill Road in the west to Stanley Boulevard in the east. From the I-680 offramps to Sunol Boulevard, it is a four-lane divided roadway. East of Sunol Boulevard, Bernal Avenue narrows to two lanes. Between I-680 and Sunol Boulevard along the project frontage, parking is restricted; there is a Class I bike/pedestrian path on the south side of Bernal. Limited access to the Alameda County Fairgrounds is provided from Bernal Avenue. West of I-680, Bernal narrows to a two-lane bridge over the Arroyo de la Laguna and extends as two functional lanes west to Foothill Road.

*Case Avenue* is a two-lane local roadway with a two-way left-turn lane, extending south of Bernal Avenue. North of Bernal and opposite Case Avenue, Old Bernal Avenue extends north to Main Street. Access to residential, school, library, and government uses is provided from Old Bernal Avenue/Case Avenue. Parking and bicycle lanes are provided along these roadways.

*Valley Avenue* is a four-lane divided roadway with parking restrictions and bicycle lanes. Access to residential neighborhoods, retail centers and the Alameda County Fairgrounds is provided from Valley Avenue.

*Junipero Street* and *Sycamore Road* are two-lane roadways. Both roads provide access to the residential neighborhoods east of Sunol Boulevard. Junipero was recently extended to Case Avenue as a two-lane roadway.

*Sunol Boulevard* is a two- to four-lane roadway from the I-680 interchange to Junipero Street and a four-lane divided roadway north of Junipero Street. Parking is restricted on Sunol Boulevard. Bicycle lanes are provided. Sunol Boulevard becomes First Street at its intersection with Bernal Avenue.

*First Street* is a two-lane roadway with a two-way left-turn lane. First Street extends from Bernal Avenue as a continuation of Sunol Boulevard to its intersection with Stanley Boulevard. Parking is allowed along First Street. Access to residential uses is provided along the east side of First Street, and access to commercial uses is provided on the west side of the street.

*Foothill Road* is a two- to six-lane facility. As a north-south roadway, it parallels I-680 from the community of Sunol in the south to Alamo in the north. North of I-580, Foothill Road becomes San Ramon Road and north of Alcosta Boulevard becomes San Ramon Valley Boulevard.

*Main Street* is a two-lane roadway that extends from Bernal Avenue to Stanley Boulevard, providing access to downtown Pleasanton. North of Stanley Boulevard, Main Street becomes Santa Rita Road. Parking is provided along Main Street.

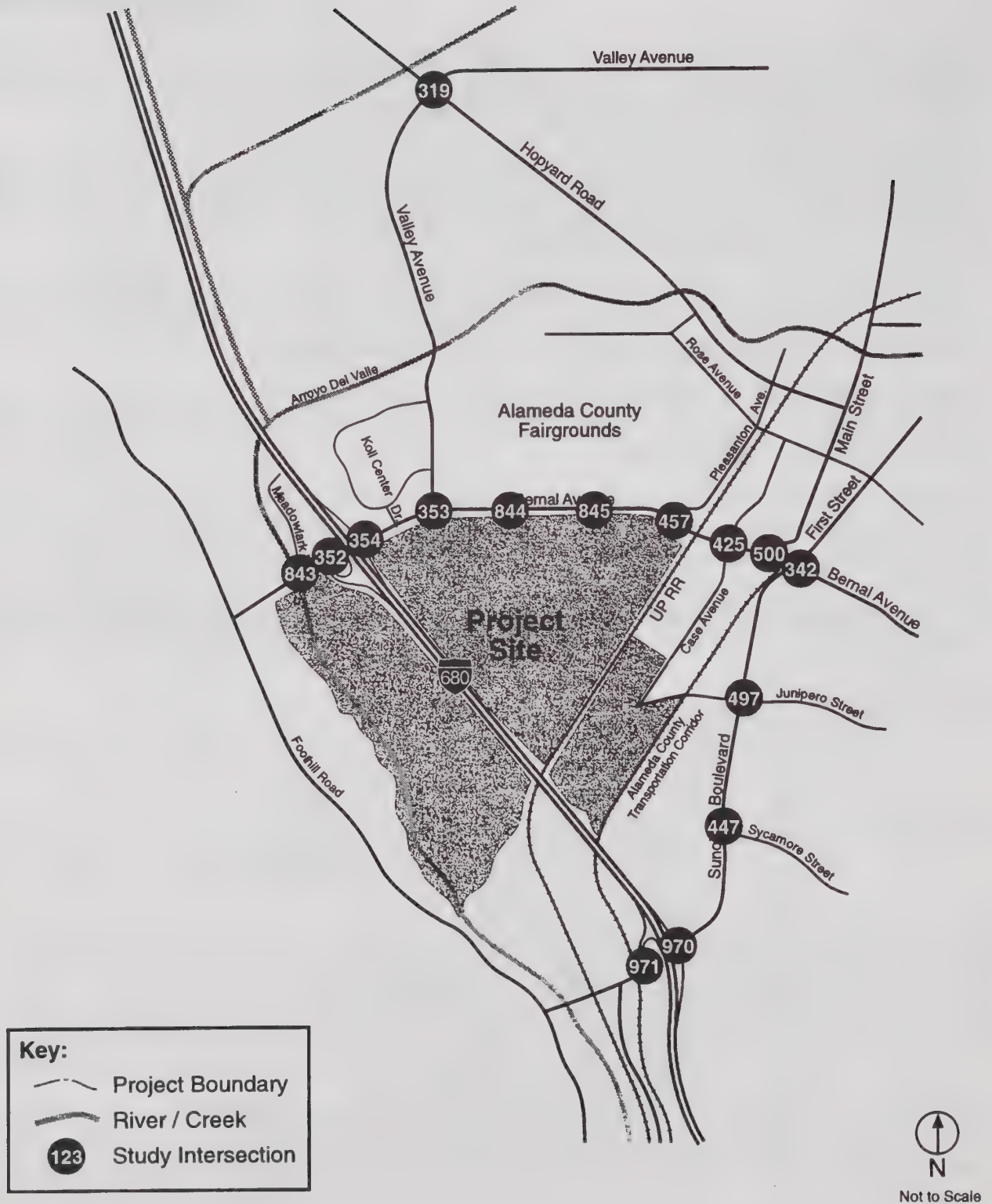
*Pleasanton Avenue* is a two-lane roadway that extends north from Bernal Avenue to St. Mary/Division Street, providing access to the Alameda County Fairgrounds. Parking is provided on both sides of the street except along portion of the fairgrounds frontage where parking is restricted to one side only.

(b) *Intersections Included in the Analysis.* Intersections included in this analysis (“study intersections”) are shown in Figure 25. They are listed below, along with their identifying numbers (from the City’s traffic model):

<u>Number</u>	<u>Intersection Location</u>
319	Hopyard Road at Valley Avenue
342	Bernal Avenue at First Street/Sunol Boulevard
352	Bernal Avenue at I-680 Southbound (SB) Ramps
353	Bernal Avenue at Valley Avenue
354	Bernal Avenue at I-680 Northbound (NB) Ramps
425	Bernal Avenue at Case Avenue
447	Sunol Boulevard at Sycamore Road
457	Bernal Avenue at Pleasanton Avenue
497	Sunol Boulevard at Junipero Street
500	Bernal Avenue at Main Street
843	Meadowlark Drive at Bernal Avenue
844	SFW Mid Access at Bernal Avenue
845	SFW East Access at Bernal Avenue
970	Sunol Boulevard at I-680 Northbound (NB) Ramps
971	Sunol Boulevard at I-680 Southbound (SB) Ramps

(2) *Vehicular Traffic.* On the local road network, signalized intersections generally control traffic flow and thus define overall traffic conditions. Their operations are evaluated based on the ratio of volume to theoretical capacity (v/c). Traffic conditions on local roads are evaluated primarily on the basis of AM and PM peak periods; peak hour traffic is the highest one hour of traffic for the analysis period. Freeway operations are also evaluated based on v/c ratios. (More detailed descriptions of impact criteria are presented in Section 3.)





Source: Fehr & Peers Associates

Figure 25  
Study Area Intersections

(a) **Existing Traffic Volumes.** Existing traffic volume data were obtained from *Annual Traffic Counts for Baseline 1996 in the City of Pleasanton*, adopted by the City of Pleasanton in June 1996.

(b) **Existing Intersection Operations.** The City of Pleasanton defines intersection operations in terms of the sum an intersection's volume-to-capacity (v/c) ratios under each critical signal phase, which yields an overall intersection v/c ratio. When the ratio reaches 1.00, the intersection is said to be "at capacity" and is described as operating at Level of Service (LOS) E and approaching LOS F.

City of Pleasanton guidelines state that, in general, operating conditions are considered unsatisfactory if they exceed Level of Service D. Table 31, summarizing the existing (1996) intersection operations, shows that all study intersections are currently operating at acceptable levels of service. The detailed calculation sheets are on the file with the Planning Department.

**Table 31**  
**Intersection Level of Service Results for 1996**

Intersection	Level of Service	
	AM	PM
319 Hopyard at Valley	A	A
342 Bernal at First/Sunol	B	B
352 Bernal at I-680 SB Ramps	unsignalized	unsignalized
353 Bernal at Valley	B	A
354 Bernal at I-680 NB Ramps	unsignalized	unsignalized
425 Bernal at Case	B	A
447 Sunol at Sycamore	unsignalized	unsignalized
457 Bernal at Pleasanton	unsignalized	unsignalized
497 Sunol at Junipero	A	A
500 Bernal at Main	unsignalized	unsignalized
843 Meadowlark at Bernal	unsignalized	unsignalized
844 SFW Mid Access at Bernal	—	—
845 SFW East Access at Bernal	—	—
970 Sunol at I-680 NB Ramps	unsignalized	unsignalized
971 Sunol at I-680 SB Ramps	unsignalized	unsignalized

— intersection does not exist at this time.

Note: LOS calculation is for intersection with signalized operations only; no analysis has been done for either delay at unsignalized intersections or for signal warrants.

Source: TJKM, Annual Traffic Counts for Baseline 1996 in the City of Pleasanton, June 1996

(c) **Existing Freeway Operations.** According to the Alameda County Congestion Management Agency, the I-680 corridor through the Bernal Avenue interchange area operates at a Level of Service C or better. South of Pleasanton (through the Sunol Grade), I-680 operates at an unacceptable service level during the morning peak period. In the afternoon peak period, I-680 operates at an unacceptable service level in Santa Clara County over the Sunol Grade, but improve to an acceptable level in Alameda County.



During the morning period, it is not uncommon for the congested corridor to adversely affect traffic operations on southbound I-680 back to the Sunol interchange.

**(d) Existing Freeway Ramp Operations.** The on- and offramps at the Bernal Avenue interchange with I-680 and the Sunol Boulevard interchange with I-680 are within the ramp capacity limit of 1,440 vehicles per hour per lane for a looped ramp and 1,600 vehicles per hour per lane for a diagonal (straight) ramp. The study ramp with the highest peak hour traffic volume in 1996 was the I-680 SB offramp at Bernal Avenue: it had a PM peak hour flow of 1,000 vehicles. Existing ramp traffic volumes are compared to theoretical capacities in Table 33 (p. 173).

**(e) Traffic Conditions During Special Events at the Alameda County Fairgrounds.** The project site is situated across Bernal Avenue from the Alameda County Fairgrounds. The three largest events at the fairgrounds are the County Fair, with a maximum attendance of 50,000 people in one day; the Good Guys, with attendance at 35,000 people; and the Scottish Games, with 12,000 people. Fairgrounds access is typically from Valley Avenue, resulting in traffic congestion backing onto Valley Avenue and into its intersection with Bernal Avenue during the peak arrival and departure times.

During the most congested periods, police officers control traffic flow manually at the Valley Avenue/Bernal Avenue intersection. These controls are needed to insure that the vehicle queue into the fairgrounds does not block westbound traffic flow on Bernal Avenue. Controlling left-turning traffic from Bernal Avenue onto Valley Avenue results in a vehicle queue on Bernal Avenue extending back to and through the I-680 interchange. This condition has an adverse impact on eastbound traffic flow on Bernal Avenue between the interchange and Valley Avenue. Eastbound drivers can avoid much of the congestion caused by drivers waiting to turn left onto Valley Avenue, however, by using the outside-most through lane on Bernal Avenue.

Traffic count data for 1996 indicate that overall traffic levels are similar during the weeks prior to and during the County Fair. This similarity suggests that drivers who normally use Bernal Avenue and Valley Avenue in the vicinity of the fairgrounds are using other routes during the fairgrounds events. Because fairgrounds visitors replace diverted drivers, the resulting net change in overall traffic volumes is negligible. Also, the peak time(s) for fairgrounds-related traffic generally differs from the midweek AM and PM peak times for normal local traffic.

**(3) Transit.** Bus service in the City of Pleasanton is provided by Livermore/Amador Valley Transit Authority (LAVTA). LAVTA provides both scheduled, fixed-route and dial-a-ride bus services to the cities of Dublin, Pleasanton, and Livermore. The City of Pleasanton also provides its own dial-a-ride service. At this time, there are no bus routes servicing the proposed project site. The nearest routes serve downtown Pleasanton. These routes are not located within close proximity of the project site and would not be likely to be used by project-related traffic unless the route structures are reconfigured.

The project site is located four miles south of the East Dublin/Pleasanton BART station, which opened on May 10, 1997. The planned BART headways (time between trains) are nine minutes. Since most BART patrons arrive by auto, parking is an important feature. The Tri-Valley Transportation Model projected a combined parking demand of 6,000 spaces for the two Dublin/Pleasanton stations; 2,600 spaces are provided at the East Dublin/Pleasanton station.

There are two existing railroad corridors in the project area: the UPRR and the Alameda County transportation corridor (formerly the Southern Pacific Railroad). The UPRR tracks are being used at this time for freight movement. The transportation corridor is not being used at this time.

**(4) Bicycle and Pedestrian Circulation.** The bicycle network in the City of Pleasanton consists of three different types of bicycle facilities: bicycle paths (Class I), bicycle lanes (Class II), and bicycle routes (Class III). A bicycle path is an offstreet bicycle facility for the exclusive use of bicycles and pedestrians. A bicycle lane is a one-way path on the side of a roadway that is specifically signed and striped for bicycle travel. A bicycle route is generally a shared bicycle facility on the roadway with no striped designation for travel.

A Class I bikeway currently exists on Bernal Avenue between downtown Pleasanton and Valley Avenue. A Class II bike lane is provided along the portion of Sunol Boulevard between Bernal Avenue and Junipero Street.

## **b. The “Future Setting”**

This section addresses transportation conditions for the future analysis year without the proposed project. This scenario is considered the future setting, from which all project-related impacts are measured.

**(1) Background and Methodology.** The description of the future setting is based on an adopted methodology and set of assumptions regarding land use and travel behavior. The assumptions and traffic model are described in the following paragraphs.

In the future setting, “background traffic” is traffic associated with existing development and currently-approved projects; it excludes traffic associated with the proposed project. The resulting traffic volumes are on file with the Pleasanton Planning Department.

***(a) Assumptions about Land Use.*** The land use assumptions include all existing uses in Pleasanton plus developments that have been approved but have not yet been constructed or occupied. Assuming no development on the project site provides a base case scenario to which development-based alternatives can be compared.

***(b) Assumptions about Travel Behavior: Pleasanton City Traffic Model.*** Estimates of future traffic were projected using the Pleasanton Citywide Transportation Model. This traffic forecasting tool was first developed as part of the 1986 Pleasanton General Plan and contains specific information regarding the City’s land use and street network.

Over the years, the model has been updated and expanded to provide more accurate estimates of conditions for critical intersections in Pleasanton. Initially, this work effort was oriented toward the northern portions of Pleasanton. Subsequently (1990-91), follow-up work was completed to provide Citywide traffic estimates. These estimates include the area in the vicinity of the proposed project site.

***(c) Potential Cut-through Traffic.*** The Pleasanton model, through its 1996 version, does not estimate through traffic of future trips originating and ending outside the City of Pleasanton. Existing through traffic is, however, included in the model-generated traffic projections via the existing traffic volumes, which are input into the model and updated annually. According to the City’s Traffic Engineer, the transportation infrastructure in the project vicinity supports the conclusion that through traffic is accurately accounted for in the estimates of existing traffic and will not increase significantly in the future. Fehr & Peers Associates concurs with this assessment. It is unlikely that a significant number of non-Pleasanton through trips would affect the study area.

Future congestion on freeways or arterials is the primary cause of cut-through traffic, although growth outside Pleasanton may also contribute to traffic using City arterials. City arterials are used by cut-



through traffic when they are either a more direct route or a perceived faster route during congested periods. Both I-580 along the City's northern boundary and I-680 south of Sunol Boulevard, as well as the I-680/I-580 interchange, are projected to be congested in the future. All of these routes are periodically congested under current conditions, and cut-through traffic is present (counted as "existing traffic") on some City streets.

Cut-through traffic corridors have been identified. These routes generally provide alternatives to traffic bound from I-680 northbound to I-580 eastbound (a PM occurrence); traffic bound from I-680 northbound to I-580 westbound (a less-traveled PM occurrence); traffic from Stanley Boulevard to I-580, both eastbound and westbound (in both AM and PM); traffic from Stanley Boulevard to I-680, both northbound and southbound (in both AM and PM); traffic from I-580 westbound to I-680 southbound (an AM route plus weekend PM times); from Dougherty, Tassajara, or Hacienda to I-680 southbound (in both AM and PM); and from I-680 southbound to Foothill/Niles Canyon (primarily in AM). Several of these routes could add traffic to Bernal Avenue near the proposed project or to Sunol Boulevard, on the fringe of the project.

Examples of future cut-through routes that could add traffic to the traffic modeled in the "future setting" analysis include:

- Northbound I-680 to westbound Bernal Avenue to northbound Valley Avenue to northbound Hopyard Road to I-580 (or to I-580 via West Las Positas and Stoneridge Drive), and reverse.
- Westbound Stanley Boulevard to First Street to Bernal Avenue to northbound I-680, and reverse.
- Southbound I-680 to westbound Bernal Avenue to Foothill Boulevard to Niles Canyon Road.

In the Cooperative Plan street network, there is the remote option of using Valley Avenue through the site to Sunol Boulevard and I-680, once it (Valley Avenue) is extended to Sunol Boulevard. In the Preferred Plan street network, a variety of features – including the traffic circles and other traffic calming devices, narrower streets, and indirectness of Bernal Avenue, Valley Avenue, Sunol connection – are expected to make the project area unattractive to cut-through traffic.

The routes described above all have alternative routes that are more attractive. For example, traffic from northbound I-680 to eastbound I-580 could travel via Sunol Boulevard, Main Street, and Santa Rita Road, which would be shorter during periods of extensive congestion, and via Stoneridge, Hopyard, Hacienda, and Santa Rita, which would be more direct during shorter back-ups. The Bernal Avenue route may be attractive only if the congestion queue ends very close to or shortly beyond the Bernal offramp. Similarly, the Stanley-to-I-680 route has more attractive alternatives via Valley Avenue, Santa Rita, and Stoneridge, and the southbound Bernal-to-Foothill route has more direct cut-through routes via the Sunol interchange (using either Pleasanton Avenue-Sunol Road or Castlewood-Foothill) to reach Highway 84. Use of this route is likely to be limited to occasions when the southbound queue backs up beyond the Sunol interchange but does not reach much beyond Bernal Avenue (since the Stoneridge-to-Foothill southbound route would be more attractive to potential cut-through drivers during periods of truly heavy congestion).

For the significant cut-through movements likely to occur in Pleasanton, the Bernal Avenue/I-680 interchange is not a convenient location. Nevertheless, there will be times when an incident blocks I-680, creating congestion within the vicinity of Bernal Avenue and causing motorists to seek an alternative route. The impact of this occasional event will be reduced by the relative lack of capacity available for cut-through trips. The high demand projected for the Bernal Avenue interchange and nearby intersections by Pleasanton-based trips gives potential cut-through motorists the choice of local street congestion, primarily at LOS D, or freeway congestion. Such a choice favors the freeway route, if only for its ease of use.

While cut-through traffic can and will occur in the vicinity of the Bernal Avenue interchange, increased traffic from this “source” is likely to be little noticed since Bernal will be operating near capacity during peak hours. Should it occur at times not coinciding with the Pleasanton-based peak trips, it would appear as a longer near-peak traffic period, and the levels of service along Bernal – although somewhat higher than they would be with no cut-through traffic – would not be likely to approach or exceed modeled peak hour levels of service. Therefore, operationally, the addition of cut-through traffic would not lead to results different from those presented.

**(d) Assumptions about Roadway and Transit Improvements in the Future Setting.** The roadway improvements assumed in this analysis reflect the existing infrastructure plus completion of all projects currently under construction and some projects described in the Pleasanton General Plan. Specific projects assumed in this analysis and with implications for the transportation system at the study intersections are:

- Arroyo Bridge at Bernal Avenue. The new bridge will be one-way eastbound, allowing the existing historic bridge to become one-way westbound. Combined, the two bridge structures will provide one westbound and two eastbound vehicle lanes, one bike lane in each direction, and pedestrian walks.
- West Las Positas interchange with I-680. (A second analysis without the WLP interchange was also completed.)
- Signalization of the Bernal Avenue intersection with the I-680 northbound ramps. (If this improvement is not undertaken before project development begins, it will be incorporated into the proposed project.)
- Signalization of the Sunol Boulevard/Sycamore Road intersection.

Proposed road improvements through the project site that are defined in the Pleasanton General Plan were not considered in the network under the background (future setting) conditions.

Future operations on the UPRR corridor could be increased at some time in the future to establish a passenger/commuter rail service between Livermore and San Jose. If this expansion were to occur, it is likely that the proposed station location would be in the vicinity of downtown Pleasanton, and that the station would be located along the north side of Bernal Avenue, using an existing fairgrounds parking lot. A pilot project, of limited duration, would run two trains in the early morning hours and two in the evening; it is not expected to have a significant effect on peak hour traffic.

The Alameda County transportation corridor could be upgraded to a historical rail corridor. This upgrade would require private and/or government financing, which has not been identified. Because of funding constraints, this project was assumed in the study.

**(2) Vehicular Traffic Operations.** Traffic volumes, intersection operations, and freeway operations are discussed in turn.

**(a) Background Traffic Volumes for the Future Setting.** The traffic model was used to estimate background traffic volumes in the project study area for the analysis condition “existing + approved projects.”

**(b) Background Intersection Operations for the Future Setting.** The results of the intersection analyses are presented in Table 32, which summarizes the peak hour level of service for each study intersection. The analysis worksheets are on file in the Pleasanton Planning Department. These results indicate



that all study locations with signalized intersections would operate at acceptable standards during the AM and PM peak hours of operation.

**Table 32**  
**Background Intersection Level of Service Results for Future Setting**

Intersection	Existing (1996)		Background (Future Setting) With WLP		Background (Future Setting) Without WLP		Meet Peak Hour Signal Warrant? (Yes/No)
	AM	PM	AM	PM	AM	PM	
319 Hopyard at Valley	A	A	A	B	B	C	—
342 Bernal at First/Sunol	B	B	B	B	B	B	—
352 Bernal at I-680 SB Ramps	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	No
353 Bernal at Valley	B	A	B	A	D	C	—
354 Bernal at I-680 NB Ramps†	unsig.	unsig.	B	D*	B	D*	—
425 Bernal at Case	B	A	C	B	C	B	—
447 Sunol at Sycamore	unsig.	unsig.	A	A	A	A	—
457 Bernal at Pleasanton	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	Yes
497 Sunol at Junipero	A	A	A	B	A	B	—
500 Bernal at Main	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	Yes
843 Meadowlark at Bernal	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	No
844 SFW Mid Access at Bernal	—	—	—	—	—	—	—
845 SFW East Access at Bernal	—	—	—	—	—	—	—
970 Sunol at I-680 NB Ramps	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	Yes
971 Sunol at I-680 SB Ramps	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	Yes

unsig.: unsignalized.

\* With pedestrian signal phasing, this intersection would operate at LOS E.

† This signal is assumed to be installed prior to project development; if it is not, it would be installed as part of the project.

Note: "Background (Future Setting)" reflects existing traffic plus traffic from all approved development in Pleasanton.

Source: TJKM, Letter Report, March 13, 1997

The traffic manual published by Caltrans defines "Signal Warrants" to assist in the decision making process when intersection signalization is being considered. There are 11 warrants, one of which is the peak hour traffic volume warrant. Meeting this warrant should not be the sole justification for signalization; rather, this information should be used to assist the City in determining the need for further analysis beyond the scope of this environmental report.

The unsignalized intersections in this study were evaluated for the peak hour signal warrant, and the results of this evaluation are also reported in Table 32. Four of the unsignalized intersections meet the peak hour signal warrant: Bernal Avenue/Pleasanton Avenue (457), Meadowlark Drive/Bernal Avenue (843), Sunol/I-680 northbound ramps (970), and Sunol/I-680 southbound ramps (971).

(c) *Background Freeway Operations for the Future Setting.* Traffic flow characteristics on the freeway system are addressed in the County EIR, the City's 1995 DEIR on rezoning and annexation of the site, and the Tri-Valley Transportation Plan (incorporated by reference; complete citations in Chapter

9). These documents provide a detailed freeway evaluation with and without development of the Bernal property. They conclude that there will be capacity constraints on I-680 south of the Sunol Boulevard interchange and on I-580 east of I-680.

TJKM's letter report to Pleasanton of April 16, 1997, reports peak hour traffic levels on the ramps at the Bernal Avenue and Sunol Boulevard interchanges. The ramp capacity limit is generally considered to be 1,440 vehicles per hour per lane for a looped ramp and 1,600 vehicles per hour per lane for a diagonal (straight) ramp. The ramps are projected to operate at acceptable levels. Table 33 summarizes the service level results for the Bernal interchange.

**Table 33**  
**Background Bernal Avenue Interchange Level of Service Results for Future Setting**

Intersection	Capacity Limit*	Existing Volume (1996)	Background (Future Setting) Volume With WLP	Background (Future Setting) Volume Without WLP
<i>AM Peak Hour</i>				
I-680 Southbound Onramp	1,600	664	391	702
I-680 Southbound Offramp	1,440	765	1,058	1,048
I-680 Northbound Onramp	1,600	738	1,051	1,157
I-680 Northbound Offramp	1,600	331	179	486
<i>PM Peak Hour</i>				
I-680 Southbound Onramp	1,600	410	346	538
I-680 Southbound Offramp	1,440	995	1,207	1,382
I-680 Northbound Onramp	1,600	805	1,351	1,403
I-680 Northbound Offramp	1,600	568	366	655

- \* No generally-applied "level of service" description exists for freeway ramps. Their operations are generally constrained by the traffic controls either at the ramp junction with the surface street or at the merge/diverge point on the freeway. "Diagonal" ramps have a nominal capacity of 2,000 vehicles per hour per lane, assuming free flow both entering the ramp and entering the freeway. "Loop" ramps have a nominal capacity of 1,800 vehicles per hour per lane. This report assumes that a one-lane diagonal ramp will operate at a satisfactory level of service with traffic volumes of up to 1,600 vehicles per hour and that a one-lane loop ramp will operate at a satisfactory level of service with traffic volumes of up to 1,440 vehicles per hour. A second ramp would be necessary, designed to function with projected freeway volumes, when ramp volumes exceed these thresholds. Thus, the "capacity limit" for the ramps is defined as the volume beyond which an additional ramp would be required to maintain satisfactory operations, assuming otherwise unrestricted roadway capacity. Roadway conditions at ramp ends are not analyzed in this table.

Source: TJKM, Letter Report, March 13, 1997

(d) *Implications of West Las Positas Interchange.* The West Las Positas (WLP) interchange is currently in the City of Pleasanton General Plan. The City staff is now considering alternatives to the planned WLP interchange, including the alternative to not build the interchange. Alternative freeway access without the WLP interchange is expected to include the Bernal Avenue interchange, which is located adjacent to the Bernal property and which would require additional improvements to accommodate the increased traffic under conditions of General Plan buildout. The implication of this circulation change as it relates to Bernal property development is addressed in this study.



Table 32, above, reports the level of service for each study intersection without the WLP interchange as well as with the interchange. The analysis worksheets are on file in the Pleasanton Planning Department. These results indicate that not building the WLP interchange will have the greatest impact on Valley Avenue at Hopyard Road and Bernal Avenue as well as the I-680 ramps at Bernal Avenue (intersections 319, 352, 353, and 354). Even with the additional traffic on Valley Avenue and at the Bernal Avenue interchange, all study locations would operate at acceptable standards during the AM and PM peak hours of operation under the background future setting condition (existing traffic plus traffic from all approved developments in Pleasanton).

Other effects of eliminating the WLP interchange would be (1) an increase in traffic along the Valley Avenue corridor and Bernal Avenue in the vicinity of I-680, as suggested in the service levels reported in Table 32 for intersections 319, 352, 353, and 354, and (2) an increase in traffic at the Bernal interchange ramp system as indicated in Table 33. The ramps are nevertheless projected to operate at acceptable levels.

**(3) Transit.** Transit service in the vicinity of the project site is limited and there are currently no plans to improve service to the area. One BART station in Pleasanton, east of I-680, has been assumed for the future setting scenario. Transit service is expected to change with the opening of this station; this change would not, however, affect transit service in the project site vicinity.

**(4) Bicycle and Pedestrian Circulation.** The Pleasanton General Plan identifies the following future improvements to the system of bike lanes:

- Extension of the Class I Bike Lane on Bernal Avenue as a Class II facility from Valley Avenue west to Foothill Road.
- Extension of the Sunol Boulevard Class II Bike Lane south to Foothill Road.
- Provision of a Class II Bike Lane on the Valley Avenue Extension from Bernal Avenue south to Sycamore Road at Sunol Boulevard.

These projects are assumed to be in place in the background (future setting) condition.

The proposed project accommodates any segments of these improvements that are located on the project site.

### **3. Impacts**

#### **a. Roadway System and Vehicular Circulation**

**(1) Approach and Methodology.** The following paragraphs briefly describe the methodology for analysis of the various components of the roadway system and vehicular circulation: intersections, freeway ramps, freeway mainline conditions, residential streets, and project access and onsite circulation.

**(a) Intersections.** Project-related vehicular impacts on the roadway system are determined through peak hour intersection analyses with and without the project's traffic. Intersection controls (e.g., stop signs, signals) are typically the constraint points in the road system where traffic congestion occurs. Measuring the project's anticipated traffic contribution to a congested intersection is the method used in this study to define project impacts.

(b) **Freeway Ramps.** Freeway ramp operations are generally constrained by either the traffic controls at the ramp junction with the surface street or at the merge/diverge point on the freeway. There is, however, a traffic volume range within which most freeway ramps operate effectively. Comparing the anticipated traffic volume to the ramp's capacity limit is a good yardstick for estimating impacts. The project's anticipated traffic contribution to a ramp is the method used in this study to define project impacts.

(c) **Freeway Mainline.** Freeway impacts vary depending on the project alternative and the freeway location. Alameda County's EIR for the Bernal property considered a proposed project with 3,380 residential units and 750,000 square feet of commercial development (Alameda County RDEIR, page 4.2R-18). Trip generation with this level of development was estimated in that analysis to total 3,341 AM peak hour trips and 5,200 PM peak hour trips. Any amount of development equal to or less than the amount described in the County's document would be within its environmental parameters and the conclusions of the County EIR would therefore apply to this study.

(d) **Onsite Residential Streets.** Evaluating residential street operations using standard volume-to-capacity analyzes does not accurately address the street's livability from the perspective of residents along the street. Because of the amount and type of interaction within and around a residential street, engineering judgment is required to address the implications of traffic volumes on residential streets. In this study, average daily traffic (ADT) is evaluated to determine the expected traffic intensity on the site's residential streets and identify impacts.

(e) **Project Access, Egress, and Through Circulation.** The implications of traffic circulation on residents and visitors to the site is best evaluated via a careful review of the proposed connections to the existing road network and how they relate to the various land uses onsite. Sufficient circulation capacity is needed to provide alternative routes should an incident occur that impedes traffic on any one route.

**(2) Impact Criteria.** Impacts of development on the project site are evaluated according to the following criteria:

(a) **Intersection Impact Criteria.** Impacts would be significant if the project traffic degrades any intersection from an acceptable level of service to an unacceptable level, or further degrades an intersection already operating at an unacceptable level. According to the Pleasanton General Plan, an acceptable level of service is defined at LOS D,  $v/c=0.90$  or better.

(b) **Freeway Ramp Impact Criteria.** Impacts would be significant if project-related traffic would contribute to traffic volumes in excess of 1,440 vehicles per hour per lane on a looped freeway ramp or 1,600 vehicles per hour per lane on a diagonal freeway ramp.

(c) **Freeway Mainline Impact Criteria.** Impacts would be significant if added traffic would contribute to traffic volumes in excess of 2,200 vehicles per hour per lane (LOS E) on freeway segments. (This standard is adopted by the Alameda County Congestion Management Agency (CMA) and by the Tri-Valley Transportation Council.)

(d) **Onsite Residential Street Impact Criteria.** Impacts would be significant if the project produces ADT greater than 3,000 vehicles on a street to which individual resident driveways have direct access.

(e) **Project Access, Egress, and Through Circulation Impact Criteria.** Impacts would be significant if the project produces traffic levels that are not effectively distributed to the circulation system, or if



the circulation system contains design components that detract from safe operations, or if entry/exit points to specific parcels are insufficient to accommodate anticipated traffic levels and safe operations.

**(3) Impact Analysis.** The impacts of each alternative are evaluated in turn.

**(a) *Cooperative Plan.*** The Cooperative Plan was formulated in December 1995. This plan was evaluated under the future scenario consisting of existing 1995 traffic plus traffic from all approved but not yet constructed or occupied developments (as of 1995) in the City of Pleasanton.

The alternatives evaluated in this study and the background (future setting) traffic conditions are based on traffic projections using 1996 information. Use of traffic conditions data from different years would be expected to have the greatest effect on intersection operations. However, study analysis results were, in general, consistent between the Cooperative Plan and the Preferred Plan (Alternative 1). Because similar lane geometric assumptions were made between the Cooperative Plan and the Preferred Plan, differences between the two analyses are likely to be attributable to differing background traffic projection assumptions rather than to significantly-differing impacts. Thus, it is concluded that the use of different underlying assumptions to develop traffic projections does not affect the validity of the analysis or the accuracy of the study conclusion.

***Intersection Impacts.*** Traffic conditions at the study intersections with the future setting (existing traffic plus traffic from all approved developments in Pleasanton) plus the Cooperative Plan are summarized in Tables 34 (AM peak hour evaluation) and 35 (PM peak hour evaluation). As noted in the "Project Characteristics" section on p. 156, the results assume that Bernal Avenue would be signalized at the southbound and northbound ramp junctions.

Signalized intersections are expected to operate at acceptable service levels, except for the I-680 northbound offramp/Bernal Avenue intersection (354). This offramp intersection is expected to operate at unacceptable service levels during both the AM and PM peak hours because of the westbound right-turn movement from Bernal Avenue onto the I-680 NB on-ramp.

At the unsignalized intersection at Bernal Avenue/Pleasanton Avenue, significant side street delays would occur as traffic levels on Bernal Avenue increase. The project contributes traffic to Bernal Avenue and thus contributes to side street delay.

<b>Impact J1a.</b>	<b>Project traffic would contribute to traffic volumes at the I-680 northbound offramp/Bernal Avenue intersection resulting in LOS E and F during the AM and PM peak hours, respectively.</b>
<b>Impact J1b.</b>	<b>Project traffic would contribute to traffic volumes on Bernal Avenue through the Pleasanton Avenue intersection, potentially inhibiting access from Pleasanton Avenue to Bernal Avenue.</b>

***Freeway Ramp Impacts.*** The analysis of the Cooperative Plan assumes signal installations at the I-680 ramp intersections with Bernal Avenue.

Development of the site consistent with the Cooperative Plan would contribute to traffic on the freeway ramps. The I-680 NB onramp and SB offramp are expected to operate at unacceptable service levels. Tables 36 and 37 summarize the peak hour traffic projections and service level results for the on/offramps at the Bernal Avenue interchange with I-680.

**Table 34**  
**Intersection Level of Service Results for the AM Peak Hour**  
**(Future Setting Plus Proposed Development)**

Intersection	Background (Future Setting)		Cooperative Plan	Preferred Plan		Alternative 2	
	With WLP	W/out WLP	With WLP <sup>1</sup>	With WLP	W/out WLP	With WLP	W/out WLP
319 Hopyard at Valley	A	B	A	A	B	A	B
342 Bernal at First/Sunol	B	B	B	B	C	B	C
352 Bernal at I-680 SB Ramps <sup>2</sup>	unsig.	unsig.	D	C	D	C	D
353 Bernal at Valley	B	D	C	C	D	C	D
354 Bernal at I-680 NB Ramps <sup>3</sup>	unsig.	unsig.	E	D	D	D	D
425 Bernal at Case	C	C	C	C	D	C	D
447 Sunol at Sycamore	A	A	A	A	A	A	A
457 Bernal at Pleasanton	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.
497 Sunol at Junipero	A	A	A	B	B	B	B
500 Bernal at Main	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.
843 Meadowlark at Bernal <sup>2</sup>	unsig.	unsig.	B	B	B	B	B
844 SFW Mid Access at Bernal <sup>2</sup>	—	—	A	A	A	A	A
845 SFW East Access at Bernal <sup>2</sup>	—	—	B	B	B	B	B
970 Sunol at I-680 NB Ramps	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.
971 Sunol at I-680 SB Ramps	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.

1. The Cooperative Plan was not evaluated without the WLP interchange because a different baseline was used. The analysis was not updated because the plan evolved to the Preferred Plan.
2. The project applicant proposes to signalize these intersections as part of the project proposal if signals have not been installed prior to project development.
3. This signal is assumed to be installed prior to project development; if it is not, it would be installed as part of the project.

Source: TJKM, Letter Report to City of Pleasanton, March 13, 1997

**Impact J2.** Project traffic would contribute to traffic volumes at the I-680 NB onramp and SB offramp, contributing to unacceptable ramp service levels during the AM and PM peak hours.

*West Las Positas Interchange Impacts.* The proposed project was not evaluated under a condition without the WLP interchange. Its impacts under this scenario would, however, be similar to those evaluated for the Preferred Plan (see p. 182).

*Freeway Mainline Impacts.* Development levels for the proposed project include 577,000 square feet of commercial development and a maximum of 1,900 residential units. This level of development is within the amount considered in the County EIR. Traffic associated with this development would add to the traffic generated by existing and proposed/approved development projects, contributing to volumes that would cause operation at unacceptable levels (more than 2,200 vehicles per hour per lane) in several locations, including I-580 throughout the East County and I-680 south of Sunol Boulevard.

**Impact J3.** Project traffic would contribute to freeway traffic volumes that exceed acceptable levels on the regional transportation system.



**Table 35**  
**Intersection Level of Service Results for the PM Peak Hour**  
**(Future Setting Plus Proposed Development)**

Intersection	Background (Future Setting)		Cooperative Plan	Preferred Plan		Alternative 2	
	With WLP	W/out WLP	With WLP <sup>1</sup>	With WLP	W/out WLP	With WLP	W/out WLP
319 Hopyard at Valley	B	C	C	C	D	C	D
342 Bernal at First/Sunol	B	B	B	C	C	C	C
352 Bernal at I-680 SB Ramps <sup>2</sup>	unsig.	unsig.	D	D	E	C	D
353 Bernal at Valley	A	C	D	D	D	C	D
354 Bernal at I-680 NB Ramps <sup>3</sup>	unsig.	unsig.	F	F	F	F	F
425 Bernal at Case	B	B	D	D	D	D	D
447 Sunol at Sycamore	A	A	A	A	A	A	A
457 Bernal at Pleasanton	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.
497 Sunol at Junipero	B	B	A	B	B	B	B
500 Bernal at Main	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.
843 Meadowlark at Bernal <sup>2</sup>	unsig.	unsig.	C	C	C	C	C
844 SFW Mid Access at Bernal <sup>2</sup>	—	—	B	B	B	B	B
845 SFW East Access at Bernal <sup>2</sup>	—	—	C	C	C	C	C
970 Sunol at I-680 NB Ramps	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.
971 Sunol at I-680 SB Ramps	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.

1. The Cooperative Plan was not evaluated without the WLP interchange because a different baseline was used. The analysis was not updated because the plan evolved to the Preferred Plan.
2. The project applicant proposes to signalize these intersections as part of the project proposal if signals have not been installed prior to project development.
3. This signal is assumed to be installed prior to project development; if it is not, it would be installed as part of the project.

Source: TJKM, Letter Report to City of Pleasanton, March 13, 1997

**Onsite Residential Street Impacts.** West Parcel development with the proposed project includes about 600 housing units. About 80 percent of the traffic associated with this development will use the access road intersecting Bernal Avenue opposite Meadowlark Lane. The remaining 20 percent would go under I-680 via the Pleasanton Avenue Extension to the Valley Avenue Extension.

Daily traffic on the access road is expected to be 4,800 vehicles at Bernal Avenue. This volume exceeds the acceptable level for a residential street. Further south, daily traffic would decrease, eventually falling to less than 3,000 vehicles south of the first intersection in the southern residential parcel.

**Impact J4a.** Traffic levels would exceed residential street capacity on the West Parcel access road from Bernal Avenue south through the northernmost residential subdivision.

**Table 36**  
**Bernal Avenue Interchange Level of Service Results for AM Peak Hour<sup>1</sup>**

Intersection	Capacity Limit <sup>1</sup>	Background (Future Setting) Volume	Cooperative Plan Volume <sup>2</sup>	Preferred Plan Volume	Alternative 2 Volume
<b>With West Las Positas</b>					
I-680 Southbound Onramp	1,600	391	543	484	484
I-680 Southbound Offramp	1,440	1,058	1,619	1,688	1,688
I-680 Northbound Onramp	1,600	1,051	1,995	1,754	1,754
I-680 Northbound Offramp	1,600	179	217	347	347
<b>Without West Las Positas</b>					
I-680 Southbound Onramp	1,600	702	—	794	794
I-680 Southbound Offramp	1,440	1,048	—	1,648	1,648
I-680 Northbound Onramp	1,600	1,157	—	1,825	1,825
I-680 Northbound Offramp	1,600	486	—	553	553

1. See note following Table 33 for limitations on evaluation of ramp operations.
2. The Cooperative Plan was not evaluated with the WLP because a different baseline was used. The analysis was not updated because the plan evolved to the Preferred Plan.

Source: TJKM, Letter Report, March 13, 1997

**Table 37**  
**Bernal Avenue Interchange Level of Service Results for PM Peak Hour<sup>1</sup>**

Intersection	Capacity Limit <sup>1</sup>	Background (Future Setting) Volume	Cooperative Plan Volume <sup>2</sup>	Preferred Plan Volume	Alternative 2 Volume
<b>With West Las Positas</b>					
I-680 Southbound Onramp	1,600	346	371	464	464
I-680 Southbound Offramp	1,440	1,207	2,299	2,254	2,254
I-680 Northbound Onramp	1,600	1,351	2,115	2,196	2,196
I-680 Northbound Offramp	1,600	366	448	499	499
<b>Without West Las Positas</b>					
I-680 Southbound Onramp	1,600	538	—	656	656
I-680 Southbound Offramp	1,440	1,382	—	2,377	2,377
I-680 Northbound Onramp	1,600	1,403	—	2,207	2,207
I-680 Northbound Offramp	1,600	655	—	788	788

1. See note following Table 33 for limitations on evaluation of ramp operations.
2. The Cooperative Plan was not evaluated with the WLP because a different baseline was used. The analysis was not updated because the plan evolved to the Preferred Plan.

Source: TJKM, Letter Report, March 13, 1997



*Onsite Access, Egress, and Through Circulation Impacts.* Under the Cooperative Plan, access to the commercial development in the Central Parcel would be provided primarily via three signalized intersections on Bernal Avenue. The intersection at Valley Avenue is currently signalized. The other two are not currently signalized; when signals are installed, the following impacts could occur:

- Conflicts with fairgrounds activities.
- Impediments to through traffic movements on Bernal Avenue resulting from left- and right-turning traffic into the project site.

**Impact J5a. The signalized access to/from Bernal Avenue could conflict with fairgrounds access and through traffic on Bernal Avenue.**

The existing mature trees in the median of Bernal Avenue would add the following concerns at the new signalized intersections:

- Sight distance restrictions for drivers of vehicles accessing the project site created by the existing mature trees in the median on Bernal Avenue.
- Limitations on left-turn designs from Bernal Avenue into the site caused by the existing median trees.

**Impact J5b. Existing mature trees within the Bernal Avenue median could limit sight distances at the signalized access points to/from Bernal Avenue and could limit the design of left-turn access to the Central Parcel.**

The Central Parcel contains a loop road that provides access to Bernal Avenue and to the East Parcel (via the Valley Avenue Extension). The UPRR tracks extend through the project site, separating the Central and East Parcels. At-grade crossings of the railroad tracks by the road extension would increase the potential for train/vehicle conflicts. To avoid such conflicts, the Cooperative Plan proposes a grade separation at this crossing. The proximity of the I-680 overcrossing of the UPRR tracks to the Valley Avenue crossing dictates an overcrossing for the Valley Avenue grade separation as well.

The West Parcel has two access points: one at Bernal Avenue and one at the Pleasanton Avenue Extension to Valley Avenue. This design provides an effective circulation system for vehicle flows on the West Parcel.

Onsite roads would be designed to meet City of Pleasanton standards for width, intersection layout, and alignment.

*Special Events: Alameda County Fairgrounds.* It is unlikely that fairgrounds activities and project development would conflict except possibly during those major fairgrounds events that draw the largest attendance. As noted in the Setting section, it appears that regular users of Bernal and Valley Avenues avoid the area by using alternate routes during large events at the fairgrounds. Future residents of the proposed project are also likely to use alternate routes, away from the immediate area, to avoid fairgrounds traffic. Routes available for traffic wishing to exit the project site would include (1) Case Avenue or Sunol Boulevard (via the Junipero Street Extension) for traffic seeking to travel southbound on I-680, (2) Bernal Avenue via the two signalized intersections that provide access to the Central Parcel for traffic to downtown Pleasanton or points east, or (3) via the access road on the West Parcel for traffic seeking to travel northbound on I-680. This condition would occur infrequently (limited periods, three or four times per year), and so would not be considered an adverse environmental impact.

Residential areas east of the fairgrounds currently require onstreet parking prohibitions to keep fairgrounds-related parking out of the residential neighborhoods. Similar requirements may be needed on the project site to minimize parking impacts on the residential areas within the proposed project.

**Impact J6. Major fairgrounds events that draw a large attendance may cause shortages of onstreet parking within the project site, resulting in a significant parking impact.**

*(b) Preferred Plan.* The Preferred Plan (Alternative 1) was developed through a series of public workshops in 1996 and concluded with the May 1996 plan illustrated in Figure 21 (p. 159). The Preferred Plan was evaluated under the future scenario consisting of existing 1996 traffic plus traffic from all approved but not yet constructed or occupied developments (as of 1996) in the City of Pleasanton. Overall land use with this plan is consistent with the Cooperative Plan, but parcel locations and onsite circulation are different.

*Intersection Impacts.* As in the Cooperative Plan analysis, the analysis of intersection operations for the Preferred Plan assumes that Bernal Avenue would be signalized at the southbound and northbound ramp junctions.

To test the Preferred Plan street system (particularly the Village Green concept), staff ran the traffic model assuming worst case traffic from commercial and office uses as well as from residential units in the Central Parcel. Although intersection levels of service were marginally acceptable, operational impacts were noted around the Village Green with both residential traffic and commercial/office traffic using the same single access to reach the core Central Parcel. In response to this concern, staff and the applicant agreed to the following additional modification of the street system:

- *Bernal Avenue:* Create an additional access route into the site, from a signalized intersection on Bernal Avenue east of Valley Avenue that connects with the extended Valley Avenue south of the Village Green. This street would provide an alternate route for residential traffic.

The Preferred Plan AM and PM peak hour levels of service, shown in Tables 34 and 35, reflect the access modification. Figure 21 shows both the original street system established for the Preferred Plan and the street system that is the basis for the levels of service in Tables 34 and 35.

All signalized intersections except the I-680 northbound offramp/Bernal Avenue intersection (354) in the PM peak hour are expected to operate at acceptable service levels. As with the Cooperative Plan, the northbound offramp intersection is expected to operate at unacceptable service levels, primarily because of the westbound right-turn movement from Bernal Avenue to the I-680 northbound onramp.

The unsignalized intersection of Pleasanton Avenue at Bernal Avenue (457) is expected to remain at service level F for turning traffic from Pleasanton Avenue. The additional traffic on Bernal Avenue resulting from the Preferred Plan development would, like the traffic with the Cooperative Plan, exacerbate this already unacceptable condition.

**Impact J1a. Project traffic would contribute to traffic volumes at the I-680 northbound offramp/Bernal Avenue intersection, resulting in LOS E and F during the AM and PM peak hours, respectively.**



**Impact J1b.** Project traffic would contribute to traffic volumes on Bernal Avenue through the Pleasanton Avenue intersection, potentially inhibiting access from Pleasanton Avenue to Bernal Avenue.

Same as for the Cooperative Plan.

*Freeway Ramp Impacts.* As noted above, the analysis of the Preferred Plan assumes signal installations at the I-680 ramp intersections with Bernal Avenue.

Development of the site consistent with the Preferred Plan would contribute to traffic on the freeway ramps. The I-680 NB onramp and SB offramp are expected to operate at unacceptable service levels. This condition is consistent with the impact findings for the Cooperative Plan. Tables 36 and 37 summarize the peak hour traffic projections and service level results for the on/offramps at the Bernal Avenue interchange with I-680.

To test the ramp service level sensitivity, the Preferred Plan was re-analyzed with a 300 unit housing reduction (from 1,900 units to 1,600 units). The results of the analysis showed a reduction in freeway ramp traffic volume projections; the change had no impact, however, on the resulting ramp service levels.

**Impact J2.** Project traffic would contribute to traffic volumes at the I-680 NB onramp and SB offramp, contributing to unacceptable ramp service levels during the AM and PM peak hours.

Same as for the Cooperative Plan.

*West Las Positas Interchange Impacts.* Without the WLP interchange, traffic at the Bernal interchange would be expected to increase. Traffic along the Valley Avenue corridor would also be expected to increase without the interchange.

Intersection operations with and without the WLP interchange are shown in Tables 34 and 35 (pp. 177-178). Operations along the Valley Avenue and Bernal Avenue corridors would likely deteriorate one service level if the interchange is not constructed. The I-680 freeway ramps at Bernal Avenue would experience similar impacts. These results are predicated on the study assumptions outlined in this report. Impacts J1a and J2 would continue to apply if the WLP interchange is not built, and the impacts are likely to be more severe.

*Freeway Mainline Impacts.* Development levels and impacts would be similar to those of the Cooperative Plan.

**Impact J3.** Project traffic would contribute to freeway traffic volumes that exceed acceptable levels on the regional transportation system.

Same as for the Cooperative Plan.

*Onsite Residential Street Impacts.* West Parcel development with the Preferred Plan includes about 640 housing units, a public/institutional uses, some commercial development, and a neighborhood park. Residential, commercial, and civic uses are located in the northern portion of the parcel.

About 90 percent of the traffic associated with this development will use the access road intersecting Bernal Avenue opposite Meadowlark Lane. Traffic on this access road would total about 6,000 vehicles on an average day at Bernal Avenue, exceeding the standard (3,000 vehicles) for residential streets. The remaining 10 percent of West Parcel-related traffic would go under I-680 to the extension of Valley Avenue; it is expected to disperse on the loop road on the Central Parcel.

**Impact J4a. Traffic levels would exceed residential street capacity on the West Parcel access road from Bernal Avenue south through the northernmost residential subdivision.**  
Same as for the Cooperative Plan.

The Central Parcel development includes a core residential area of single family homes surrounded by the golf course and a village residential area with apartments, townhouses, and single family homes. According to the traffic projections developed by TJKM, most streets through single family residential areas will have less than 3,000 vehicles over a typical day. There are three exceptions: (1) the Pleasanton Avenue Extension between Bernal Avenue and the first onsite intersection, (2) Valley Avenue, and (3) the Junipero Street Extension between the Central and East Parcels. Each of the three road links is anticipated to have a daily traffic flow between 4,000 and 5,000 vehicles, which exceeds the standard for residential streets. Remaining connector road links on the Central Parcel would have traffic levels in the range of 2,400 to 3,100 vehicles per day.

**Impact J4b. Traffic levels would exceed residential street capacity on neighborhood streets in the Central Parcel.**

Local roads provide access to most single family homes on the East Parcel. The exception is the Junipero Street Extension, which is a connector road between the East and Central Parcels. Average daily traffic on this road is expected to be 3,700 vehicles, which is above the 3,000 vehicle threshold for residential streets.

**Impact J4c. Traffic levels would exceed residential street capacity on neighborhood streets in the East Parcel.**

*Onsite Access, Egress, and Through Circulation Impacts.* Commercial development in the Central Parcel is accessed primarily via the signalized Valley Avenue intersection on Bernal Avenue. Secondary "right-turn only" access to and from Bernal Avenue is provided on either side of Valley Avenue. Valley Avenue would extend south from Bernal Avenue to the Village Green to form a STOP sign-controlled T-intersection with the Village Green loop road. The other two main access points to the Central Parcel would be signalized as part of the development. These two locations have the same impacts as the access arrangements in the Cooperative Plan.



**Impact J5a. The signalized access to/from Bernal Avenue could conflict with fairgrounds access and through traffic on Bernal Avenue.**

Same as for the Cooperative Plan.

**Impact J5b. Existing mature trees within the Bernal Avenue median could limit sight distances at the signalized access to/from Bernal Avenue and could limit the design of left-turn access to the Central Parcel.**

Same as for the Cooperative Plan.

The Village Green circulation concept consists of a combination of one-way and two-way circulation with STOP sign controls at many intersections. The study evaluation concluded that the design, which is illustrated in Figure 26, would result in a "moving vehicle queue" in the southbound direction through the Village Green. This condition would not adversely impact the Valley Avenue intersection with Bernal Avenue; however, access to/from the commercial development in the immediate vicinity could be compromised.

**Impact J5c. Vehicle circulation may be compromised around the Village Green Loop.**

The Valley Avenue intersection is the primary project site egress to Bernal Avenue and I-680. Right-turn-only egress is proposed at other locations along Bernal Avenue; because (according to the traffic projections) the majority of traffic will be oriented to the west and I-680, however, most traffic will exit via the Valley/Bernal location. If traffic incidents or congestion on Bernal Avenue related to special events at the fairgrounds obstruct the operation of the Valley/Bernal intersection, traffic egress from the project site would be compromised.

**Impact J5d. A circulation pattern providing only one westbound egress from the commercial area of the site (at the Valley Avenue/Bernal Avenue intersection) may inhibit traffic egress from the project site if that location is obstructed as a result of congestion or traffic incidents.**

The Preferred Plan circulation system includes numerous roundabouts and traffic circles throughout the site. Figure 23 (p. 161) illustrates the typical design for each traffic control device. These devices are effective in a residential environment to maintain slower traffic speeds without requiring traffic to stop. Because roundabouts have limited use in the Pleasanton area, it is imperative that the design clearly distinguish right-of-way for drivers approaching the intersection. The roundabout and traffic circle design concepts shown in Figure 23 were designed to accommodate emergency vehicle circulation, transit bus circulation, and delivery vehicle circulation. The final design, however, must be reviewed to insure the concept as outlined in this environmental report was carried forward correctly, so that this unfamiliar design does not cause confusion leading to safety hazards.

**Impact J5e. Roundabouts in the circulation plan, if not properly designed, could cause driver confusion with respect to right-of-way and cause adverse effects on traffic safety, emergency vehicle access/response times, transit bus circulation, and delivery vehicle circulation.**

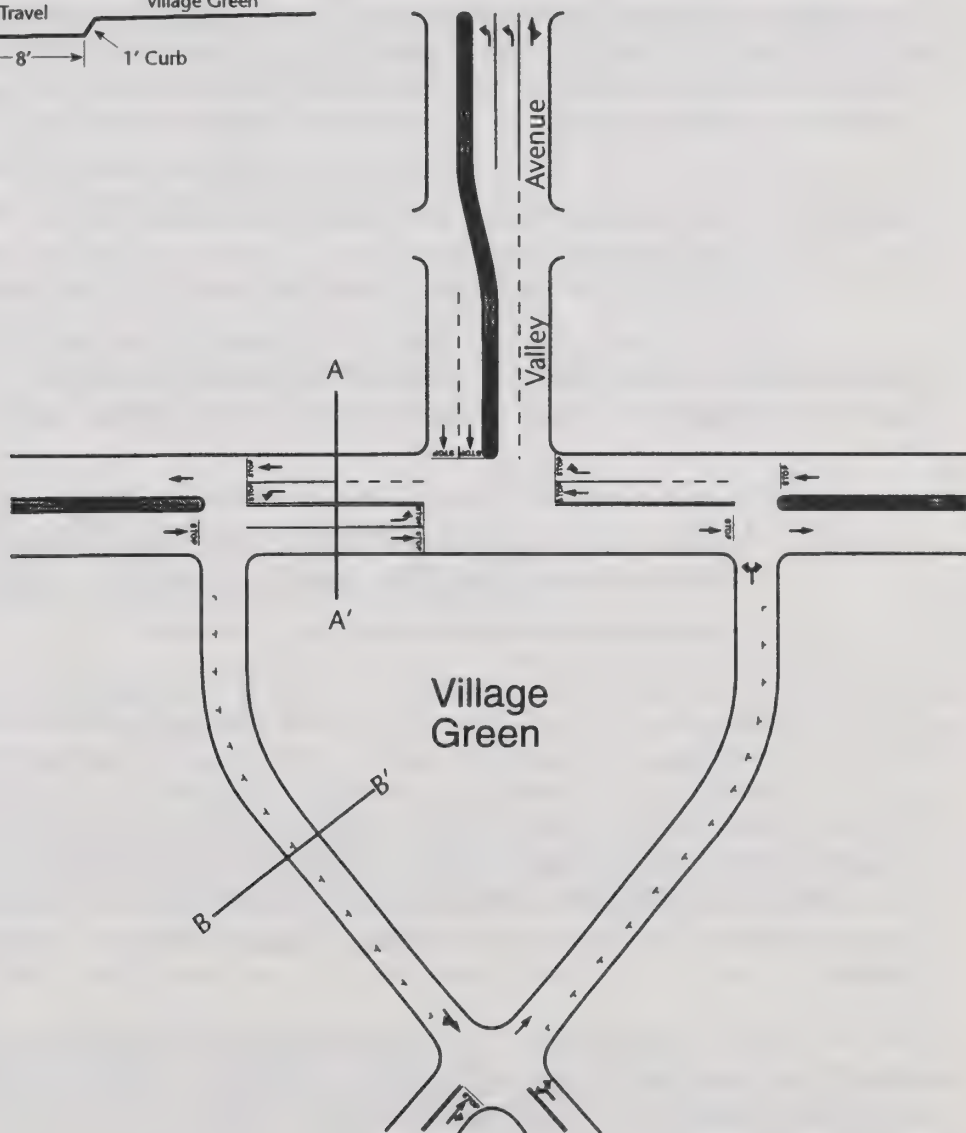
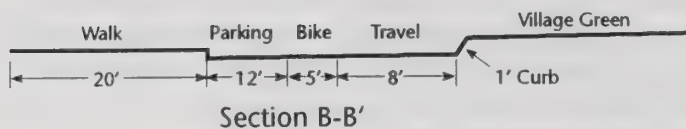
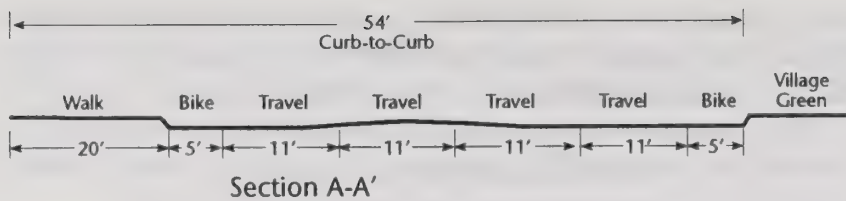


Figure 26

**Village Green Circulation**  
 General lane configuration;  
 subject to revision based on  
 development traffic requirements

Source: [Revised] Draft Design Guidelines, February 24, 1997



The Central Parcel contains a loop road accessing Bernal Avenue at two signalized locations and the East Parcel (via the Valley Avenue connection to the Junipero Street Extension) at one location. As in the Cooperative Plan, the route of the UPRR tracks through the project site separates the Central and East Parcels, and the proposed extension of Valley Avenue could create potential train/vehicle conflicts if the crossing is at grade. To avoid such conflicts, the Preferred Plan proposes this crossing as either an overpass or an underpass.

The West Parcel has two access points: one at Bernal Avenue and one at the extension of Pleasanton Avenue. This arrangement provides an effective circulation system for vehicle flows on the parcel.

The street system on the West Parcel would be neighborhood streets typically with a 30-foot curb-to-curb cross-section with onstreet parking (see Figure 22, p. 160). This design provides an effective cross-section to slow vehicle traffic on neighborhood streets while still maintaining effective emergency vehicle access.<sup>58</sup> It is insufficient, however, to accommodate traffic flows anticipated in the northern portion of the West Parcel (that is, volumes exceeding 3,000 vehicles in a 24-hour period; see p. 175).

**Impact J5f. Street cross-sections for some road segments on the West Parcel are inconsistent with circulation needs.**

*Special Events: Alameda County Fairgrounds.* Conditions with the Preferred Plan would be similar to those with the Cooperative Plan, with the following exception: The Preferred Plan has only one signalized intersection on Bernal Avenue other than Valley Avenue, compared to two in the Cooperative Plan.

**Impact J6. Major fairgrounds events that draw a large attendance may cause shortages of onstreet parking within the project site, resulting in a significant parking impact.**  
Same as for the Cooperative Plan.

(c) *Alternative 2.* The land use component of this alternative is similar to that of the Preferred Plan, except that the golf course is replaced by a series of lakes. Although this alternative was not modeled separately, this change is expected to reduce traffic volumes by a small amount (that is, the amount of traffic associated with the golf course). This reduction would have a negligible effect on traffic operations compared to the Preferred Plan. The plan would still call for traffic signals on Bernal Avenue midway between the Pleasanton and Valley intersections, signalization of the site access with Pleasanton Avenue and signalization of Meadowlark west of I-680. Specific differences are discussed in the following paragraphs.

*Intersection Impacts.* The study intersections would all operate at similar service levels as under the Preferred Plan. Intersection operating conditions are described in Tables 34 and 35 (p. 177-178). Because the Alternative 2 plan calls for a traffic signal at the Pleasanton Avenue/Bernal intersection, Impact J1b would not occur.

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<sup>58</sup> *Narrow Residential Streets: Do They Really Slow Down Speeds?*, James Daisa, P.E. and John Peers, P.E., Compendium of Technical Papers for the 67th ITE Annual Meeting, 1997. This paper is on file with the Pleasanton Planning Department. See also, *Best Development Practices*, Reid Ewing, Planners Press, 1996 (pp. 69-72).

**Impact J1a.** Project traffic would contribute to traffic volumes at the I-680 northbound offramp/Bernal Avenue intersection, resulting in LOS E and F during the AM and PM peak hours, respectively.

Same as for the Cooperative Plan.

*Freeway Ramp Impacts.* Differences in freeway ramp traffic volumes between Alternative 2 and the Preferred Plan are negligible. As in the Preferred Plan, Impact J2 applies to the project's contribution to ramp traffic volumes.

**Impact J2.** Project traffic would contribute to traffic volumes at the I-680 NB onramp and SB offramp, contributing to unacceptable ramp service levels during the AM and PM peak hours.

Same as for the Cooperative Plan and Preferred Plan.

*West Las Positas Interchange Impacts.* As with the Cooperative Plan and the Preferred Plan, traffic at the Bernal interchange would be expected to increase without the WLP interchange.

*Freeway Mainline Impacts.* Development levels with and impacts of Alternative 2 are the same as those of the Preferred Plan.

**Impact J3.** Project traffic would contribute to freeway traffic volumes that exceed acceptable levels on the regional transportation system.

Same as for the Cooperative Plan and the Preferred Plan.

*Onsite Residential Street Impacts.* West Parcel development with Alternative 2 would be similar to the Preferred Plan: about 640 housing units, civic uses, some commercial development, and a neighborhood park.

**Impact J4a.** Traffic levels would exceed residential street capacity on the West Parcel access road from Bernal Avenue south through the northernmost residential subdivision.

Same as for the Cooperative Plan and the Preferred Plan.

The circulation system on the Central Parcel in Alternative 2 is distinctly different from that of the Preferred Plan. The proposed grid system in Alternative 2 allows numerous access points for right-turning traffic to and from Bernal Avenue. Similar to the Cooperative Plan, there is a possibility of three signalized intersections on Bernal Avenue, providing full access to the site. Most streets through the site would have fewer than 3,000 vehicles over a typical day because of the grid system, but traffic is expected to exceed this level on the main road parallel to Bernal Avenue, connecting the extended Valley Avenue and Pleasanton Avenue.



**Impact J4b. Traffic levels would exceed residential street capacity on neighborhood streets in the Central Parcel.**  
Same as for the Preferred Plan.

Traffic and circulation conditions on the East Parcel would be similar to the Preferred Plan.

**Impact J4c. Traffic levels would exceed residential street capacity on neighborhood streets in the East Parcel.**  
Same as for the Preferred Plan.

*Onsite Access, Egress, and Through Circulation Impacts.* Commercial development in the Central Parcel is accessed via three signalized intersection on Bernal Avenue. Secondary “right-turn only” access is provided at numerous locations on Bernal Avenue. The grid system around the commercial development would distribute traffic evenly through the project site, minimizing onsite traffic congestion.

The proposal to install additional signalized intersections on Bernal Avenue as part of the development project has the same impacts as in the Cooperative Plan and the Preferred Plan.

**Impact J5a. The signalized access to/from Bernal Avenue could conflict with fairgrounds access and through traffic on Bernal Avenue.**

**Impact J5b. Existing mature trees within the Bernal Avenue median could limit sight distances at the signalized access to/from Bernal Avenue and could limit the design of left-turn access to the Central Parcel.**

The Alternative 2 site plan, like the Preferred Plan, includes numerous roundabouts and traffic circles.

**Impact J5e. Roundabouts in the circulation plan, if not properly designed, could cause driver confusion with respect to right-of-way and cause adverse effects on traffic safety, emergency vehicle access/response times, transit bus circulation, and delivery vehicle circulation.**  
Same as for the Preferred Plan.

Similar to the Preferred Plan, Alternative 2 has a road connection between the Central and East Parcels. At-grade crossings of the UPRR tracks by this road extension would increase the potential for train/vehicle conflicts. As in the Preferred Plan, this crossing is proposed as either an overpass or an underpass in order to avoid potential conflicts.

The West Parcel street system with Alternative 2 is similar to the Preferred Plan.

**Impact J5f.** Street cross-sections for some road segments on the West Parcel are inconsistent with circulation needs.  
Same as for the Preferred Plan.

*Special Events: Alameda County Fairgrounds.* Alternative 2 is similar to the Cooperative Plan and the Preferred Plan with respect to special event activities at the fairgrounds.

**Impact J6.** Major fairgrounds events that draw a large attendance may cause shortages of onstreet parking within the project site, resulting in a significant parking impact.  
Same as for the Cooperative Plan and the Preferred Plan.

(d) *Alternative 3.* Impacts of Alternative 3 on the roadway system and vehicular transportation are discussed in the County EIR, Chapter 4.2.

#### **b. Transit**

**(1) Approach and Methodology.** As noted in the Setting and Future Setting sections (pp. 168 and 174), there is currently no transit service to the project site and there are no plans to expand bus transit to the site. Even so, transit service may be provided to the area at some time in the future, and it is essential that the infrastructure be designed to accommodate it.

**(2) Impact Criteria.** Transit route service impacts are considered adverse where onsite circulation would be inadequate to accommodate buses on the primary road system.

#### **(3) Impact Analysis.**

(a) *Cooperative Plan.* Street designs onsite would meet City standards and thus be sufficient for transit bus service.

(b) *Preferred Plan.* The Preferred Plan provides an onsite street network based on design guidelines shown in Figures 22, 23, and 26 (pp. 160, 161, and 185). The street cross-sections are narrower than those typically used in Pleasanton. The narrower streets are intended to slow vehicular speeds making a safer environment for all road users. If properly design, neither the narrow streets nor the roundabouts are expected to preclude transit circulation in the future. In fact, the proposed Village Green in the Preferred Plan provides efficient “loop circulation” for transit service to access the site, serve the high intensity uses, and exit the site with the least amount of service delay.

(c) *Alternative 2.* Implications would be the same as with the Preferred Plan.

(d) *Alternative 3.* Impacts of Alternative 3 on transit are discussed in County EIR, Chapter 4.2.



### **c. Bicycles and Pedestrians**

**(1) Approach and Methodology.** Capacity constraints are not generally considered when evaluating bicycle and pedestrian impacts for this type of development. Instead, the project site plan is reviewed from the perspective of a bicyclist and pedestrian, with particular attention to facility connectivity and safety.

**(2) Impact Criteria.** Bicycle or pedestrian impacts are considered significant if the proposed project provides bike and pedestrian facilities that are discontinuous or intersect with vehicle traffic at unsafe locations.

#### **(3) Impact Analysis.**

**(a) Cooperative Plan.** Planned improvements to Pleasanton's system of bike lanes are described in the "Future Setting" section, above (p. 174).

Development of the project site could interfere with the existing and planned bike lane system along Bernal Avenue and Valley Avenue. The Class I bike facility on Bernal Avenue currently has limited vehicular crossings and the crossings that do exist have negligible traffic. Site development will increase traffic levels and introduce several new connections between Bernal Avenue and the project site. Each added connection will be a new conflict point between bicycle and vehicular traffic. Furthermore, free-flow right-turn movement between Bernal Avenue and the I-680 ramps creates a potential conflict with pedestrian and bicycle movements.

<b>Impact J7a.</b> Traffic associated with site development may cause increased vehicular conflicts with bicycle and pedestrian traffic on existing and planned bike lanes in the vicinity of the project site.
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The UPRR tracks would separate residential development west of the tracks from the existing middle school and the proposed elementary school east of the tracks. The potential for pedestrian conflicts, especially involving school children, with the UPRR tracks is a significant impact if any residential development occurs prior to the proposed grade separation between Valley Avenue and the UPRR tracks.

<b>Impact J7b.</b> Development of any Central or East Parcel residential use that occurs prior to the proposed grade separation would create the potential for pedestrian conflicts, especially involving school children, with the Union Pacific railroad tracks.
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**(b) Preferred Plan.** Impacts of the Preferred Plan would be the same as the impacts of the Cooperative Plan.

<b>Impact J7a.</b> Traffic associated with site development may cause increased vehicular conflicts with bicycle and pedestrian traffic on existing and planned bike lanes in the vicinity of the project site.  Same as for the Cooperative Plan.
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**Impact J7b.** Development of any Central or East Parcel residential use that occurs prior to the proposed grade separation would create the potential for pedestrian conflicts, especially involving school children, with the Union Pacific railroad tracks.

Same as for the Cooperative Plan.

The Preferred Plan map illustrates numerous roundabouts and traffic circles to control traffic flow onsite. These traffic control devices can hinder pedestrian and bicycle safety if not properly designed to clearly show vehicle, bicycle and pedestrian right-of-way.

**Impact J7c.** Street design that includes roundabouts and traffic circles would create the potential for bike and pedestrian conflicts with motor vehicles.

(c) *Alternative 2.* Bicycle and pedestrian impacts with Alternative 2 are identical to those of the Preferred Plan. The tracks would separate the elementary school from residential development on the East Parcel, and the middle school from residences on the Central and West Parcels.

**Impact J7a.** Traffic associated with site development may cause increased vehicular conflicts with bicycle and pedestrian traffic on existing and planned bike lanes in the vicinity of the project site.

Same as for the Cooperative Plan and the Preferred Plan.

**Impact J7b.** Development of any Central or East Parcel residential use that occurs prior to the proposed grade separation would create the potential for pedestrian conflicts, especially involving school children, with the Union Pacific railroad tracks.

Same as for the Cooperative Plan and the Preferred Plan.

**Impact J7c.** Street design that includes roundabouts and traffic circles would create the potential for bike and pedestrian conflicts with motor vehicles.

Same as for the Preferred Plan.

(d) *Alternative 3.* Impacts of Alternative 3 on bicycles and pedestrians are discussed in the County EIR, Chapter 4.2.

#### **d. Construction Period Impacts**

Site preparation and development will require use of heavy equipment and heavy trucks for movement of earth (see Chapter 5, Section Q for a discussion of grading) and construction materials. Construction traffic is typically slower than typical vehicular traffic, and may interfere with normal traffic movement; this effect would be particularly noticeable during major events at the fairgrounds. Construction-related vehicles are also likely to be heavier than typical traffic, and consequently have greater potential to damage the roadbeds on which they travel. These impacts would apply to all plan alternatives.



**Impact J8. Construction-related vehicles may impede normal traffic movements and damage existing roads.**

#### **4. Cumulative Impact Analysis**

##### **a. Cumulative Setting: General Plan Buildout Without the Project**

This scenario includes existing traffic plus buildout of the Pleasanton General Plan without development on the Bernal Property site. Roadway assumptions used in this scenario are consistent with General Plan buildout. Specific improvements in the immediate vicinity of the development site include those assumed in the “Future Setting” of this study (p. 171) plus:

- *Bernal/I-680 interchange:* Improvements would consist of:
  - New southbound offramp from I-680 to westbound Bernal Avenue. The existing configuration requires drivers to make a left turn onto Bernal Avenue. The proposed improvement results in drivers making right turns, a much easier maneuver.
  - Second right-turn lane at the I-680 southbound loop offramp to eastbound Bernal Avenue. Both lanes would become dedicated eastbound through lanes on Bernal Avenue. Traffic at the southbound offramp would not be under traffic controls.
  - Second right-turn lane from westbound Bernal Avenue to I-680 northbound onramp. Also at this intersection, three through lanes would be provided on eastbound Bernal Avenue through the intersection.
- *Valley/Bernal intersection:* Third through travel lane on Bernal Avenue in both the eastbound and westbound direction through the intersection with Valley Avenue.
- *Case/Bernal intersection:* Second southbound right-turn lane and right-turn overlap signal phase at the Case/Bernal intersection.
- *Pleasanton/Bernal intersection:* Install a traffic signal. Because these improvements would be implemented in the “no project” condition, this signal would be installed at the existing intersection of Pleasanton Avenue and Bernal Avenue.

The traffic model was used to estimate background (cumulative setting) traffic volumes in the project study area for the analysis condition “with General Plan buildout.”<sup>59</sup> The background traffic volumes were generated for two future scenarios: one with the WLP interchange and one without. The resulting traffic volumes are on file with the Planning Department.

Peak hour levels of service for the study intersections with no development on the project site are presented in Tables 38 and 39. The underlying analysis worksheets are on file with the Pleasanton Planning Department. The tables indicate that all signalized intersections would operate at acceptable standards during the AM and PM peak hours. This result occurs only if the improvements listed for the Future Setting (p. 171) and Cumulative Setting (p. 192) are constructed.

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<sup>59</sup> For the cumulative analysis, “background” traffic is existing traffic plus traffic associated with all development accommodated by General Plan buildout *except* traffic associated from the proposed project.

**Table 38**  
**Intersection Level of Service Results for the AM Peak Hour**  
**(General Plan Buildout Plus Proposed Development)**

Intersection	Background (Cumulative Setting)		Cooperative Plan With WLP*	Preferred Plan		Alternative 2	
	With WLP	W/out WLP		With WLP	W/out WLP	With WLP	W/out WLP
319 Hopyard at Valley	A	B	A	A	B	A	B
342 Bernal at First/Sunol	D	D	D	D	D	D	D
352 Bernal at I-680 SB Ramps	B	C	C	C	D	C	D
353 Bernal at Valley	B	D	C	B	D	B	D
354 Bernal at I-680 NB Ramps	B	B	A	B	B	B	B
425 Bernal at Case	D	D	D	D	D	D	D
447 Sunol at Sycamore	B	B	B	B	B	B	B
457 Bernal at Pleasanton	B	B	D	C	D	C	D
497 Sunol at Junipero	C	C	B	C	D	C	D
500 Bernal at Main	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.
843 Meadowlark at Bernal	—	—	C	C	C	C	C
844 SFW Mid Access at Bernal	—	—	C	C	C	C	C
845 SFW East Access at Bernal	—	—	B	B	B	B	B
970 Sunol at I-680 NB Ramps	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.
971 Sunol at I-680 SB Ramps	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.

\* The Cooperative Plan was evaluated with different background traffic conditions than the Preferred Plan (see discussion on p. 176). It was not evaluated without the WLP interchange. The analysis was not updated to consider operations without this interchange because the plan evolved to the Preferred Plan.

Source: TJKM, Letter Report to City of Pleasanton, March 13, 1997

As noted in the "Future Setting" section, above, traffic flow characteristics on the freeway system are evaluated in two prior environmental documents.<sup>60</sup>

As discussed in the footnote to Table 33 (p. 173), freeway ramp capacity limits at the Bernal Avenue and Sunol Boulevard interchanges are generally considered to be 1,440 vehicles per hour per lane for looped ramps and 1,600 vehicles per hour per lane for diagonal (straight) ramps. All ramps are expected to operate at acceptable service levels so long as the assumed road improvements with General Plan buildout are implemented. If the assumed improvements listed above are not implemented, the I-680 NB onramp and SB offramp at Bernal Avenue would operate at unacceptable levels.

<sup>60</sup> Final EIR, Specific Plan for Bernal Property (Alameda County) and Final EIR, Rezoning RZ-94-07 and Annexation (City of Pleasanton).



**Table 39**  
**Intersection Level of Service Results for the PM Peak Hour**  
**(General Plan Buildout Plus Proposed Development)**

Intersection	Background (Cumulative Setting)		Cooperative Plan With WLP*	Preferred Plan		Alternative 2	
	With WLP	W/out WLP		With WLP	W/out WLP	With WLP	W/out WLP
319 Hopyard at Valley	B	C	C	C	D	C	D
342 Bernal at First/Sunol	D	D	D	D	D	D	D
352 Bernal at I-680 SB Ramps	A	B	C	C	D	C	D
353 Bernal at Valley	C	D	D	C	D	C	D
354 Bernal at I-680 NB Ramps	B	C	B	B	D	B	D
425 Bernal at Case	D	D	D	D	D	D	D
447 Sunol at Sycamore	B	B	C	C	C	C	C
457 Bernal at Pleasanton	C	C	D	D	D	D	D
497 Sunol at Junipero	D	D	D	D	D	D	D
500 Bernal at Main	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.
843 Meadowlark at Bernal	—	—	C	C	C	C	C
844 SFW Mid Access at Bernal	—	—	D	D	D	D	D
845 SFW East Access at Bernal	—	—	C	C	C	C	C
970 Sunol at I-680 NB Ramps	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.
971 Sunol at I-680 SB Ramps	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.	unsig.

\* The Cooperative Plan was evaluated with different background traffic conditions than the Preferred Plan (see discussion on p. 176). It was not evaluated without the WLP interchange. The analysis was not updated to consider operations without this interchange because the plan evolved to the Preferred Plan.

Source: TJKM, Letter Report to City of Pleasanton, March 13, 1997

## **b. Impact Analysis: Buildout (Cumulative Setting) Plus the Proposed Project**

**(1) Roadway System and Vehicular Circulation.** The conclusions for all alternatives assume construction of all the road improvements listed for the Future Setting (p. 172) and the Cumulative Setting (p. 192); as noted earlier, these road improvements are consistent with adopted City plans and policies, including the General Plan. If the assumed improvements are not made, operating conditions will be less favorable; in the absence of quantified analysis, however, it is too speculative to assume the precise conditions that will occur.

**(a) Cooperative Plan.** As noted on p. 176, the Cooperative Plan was developed in December 1995 and was evaluated under the buildout scenario consisting of existing 1995 plus the General Plan buildout for the City of Pleasanton. The alternatives evaluated in this analysis are based on traffic projections using 1996 information. As noted in the discussion of project-level impacts, differences between the two analyses are likely to be attributable to differing background traffic projection assumptions rather than to significantly-differing impacts of the various plans, because similar lane geometric assumptions were made for both the Cooperative Plan and the Preferred Plan.

**Intersection Impacts.** The study intersections were evaluated to estimate intersection service levels under the development scenario including existing traffic plus traffic from buildout of the General

Plan. Tables 38 and 39 summarize the results of the AM and PM peak hour evaluation, respectively. The tables indicate that all intersections are expected to operate at acceptable service levels.

Development of the site would contribute to traffic on the roadway network in the vicinity of the project, and would thus contribute to the need for the improvements, listed previously, that have been assumed in the analysis.

**Impact J9. Project traffic would contribute to cumulative traffic growth on the road network and freeway ramps in the vicinity of the project site.**

*Freeway Ramp Impacts.* All ramps are expected to operate at acceptable levels under this scenario with the WLP interchange. This conclusion is based on the assumption that the I-680 interchange modifications are made at Bernal Avenue. Impact J9 applies to the contribution of development on the project site to cumulative ramp traffic volumes.

*West Las Positas Interchange Impacts.* The Cooperative Plan was not evaluated under a condition without the WLP interchange. Its impacts under this scenario would, however, be similar to those evaluated for the Preferred Plan (see p. 196).

*Freeway Mainline Impacts.* Development permitted by the Cooperative Plan is within the amount studied in the County EIR. Traffic associated with this development would add to the traffic generated by existing and proposed/approved development projects, contributing to volumes that would cause operation at unacceptable levels in several locations as described in the project impact analysis.

**Impact J10. Project traffic would contribute to cumulative traffic growth on the regional transportation system.**

*(b) Preferred Plan.* The Preferred Plan was evaluated under the future scenario consisting of existing 1996 traffic plus the General Plan buildout for the City of Pleasanton. Overall land use with this plan is consistent with the proposed project, but parcel locations and onsite circulation are different.

*Intersection Impacts.* All study intersections are expected to operate at acceptable service levels with the Preferred Plan, as shown in Tables 38 and 39.

As with the Cooperative Plan, development of the site would contribute to traffic on the roadway network in the vicinity of the project, and would thus contribute to the need for these improvements that have been assumed in the analysis.

**Impact J9. Project traffic would contribute to cumulative traffic growth on the road network and freeway ramps in the vicinity of the project site.**  
Same as for the Cooperative Plan.

*Freeway Ramp Impacts.* All ramps are expected to operate at acceptable levels under this scenario with the WLP interchange. This conclusion is based on the study assumption that modifications



described above under Cumulative Setting (p. 192) are made to the I-680 interchange with Bernal Avenue. Project contributions to cumulative traffic on freeway ramps are covered by Impact J9, above.

*West Las Positas Interchange Impacts.* Without the WLP interchange, traffic at the Bernal interchange and traffic along the Valley Avenue corridor would be expected to increase. Tables 38 and 39 summarize the intersection operations with and without the WLP interchange. These results are predicated on the study assumptions that modifications will be made to the I-680 interchange, Bernal Avenue, and Valley Avenue. Project contributions to cumulative future traffic conditions are covered by Impact J9, above.

*Freeway Mainline Impacts.* Development levels and impacts are the same as for the Cooperative Plan.

**Impact J10. Project traffic would contribute to cumulative traffic growth on the regional transportation system.**

Same as for the Cooperative Plan.

(c) *Alternative 2.* The Alternative 2 plan is similar to the Preferred Plan except that the golf course is replaced with lakes and the commercial component is located about midway between I-680 and Pleasanton Avenue along Bernal Avenue.

*Intersection Impacts.* Intersection impacts are identical to those of the Preferred Plan, as shown in Tables 38 and 39 (pp. 193 and 194). As with the Cooperative Plan and the Preferred Plan, development of the site would contribute to traffic on the roadway network in the vicinity of the project, and would thus contribute to the need for these improvements that have been assumed in the analysis.

**Impact J9. Project traffic would contribute to cumulative traffic growth on the road network and freeway ramps in the vicinity of the project site.**

Same as for the Cooperative Plan and the Preferred Plan.

*Freeway Ramp Impacts.* Operating conditions and impacts would be the same as in the Preferred Plan. Project contributions to cumulative traffic on freeway ramps are covered by Impact J9, above.

*West Las Positas Interchange Impacts.* Intersection operations without the WLP interchange are compared to operations with the WLP in Tables 38 and 39. These results are similar to conditions in the Preferred Plan; like the Preferred Plan analysis, they assume modifications to the I-680 interchange, Bernal Avenue, and Valley Avenue. Project contributions to future cumulative traffic conditions are covered by Impact J9, above.

*Freeway Mainline Impacts.* Development levels and impacts are the same as for the Cooperative Plan and the Preferred Plan.

**Impact J10. Project traffic would contribute to cumulative traffic growth on the regional transportation system.**

Same as for the Cooperative Plan and the Preferred Plan.

(d) *Alternative 3.* Impacts of Alternative 3 on the roadway system and vehicular transportation are discussed in the County EIR, Chapter 4.2.

**(2). *Bicycles and Pedestrians.*** Like the project-level analysis, the cumulative analysis of impacts on bicycles and pedestrians focuses on safety and the potential for conflicts with vehicular traffic.

• (a) *Cooperative Plan.* The cumulative analysis assumed several freeway ramp improvements to accommodate increased traffic volumes associated with development of the Pleasanton General Plan. These improvements include multiple (dual) “free-flow” right-turn lanes at the southbound offramp and northbound onramp. The free-flowing vehicular traffic could pose safety hazards to bicyclists and pedestrians using the continuous bike/pedestrian facility on Bernal Avenue.

**Impact J7d.** Potential for conflicts between free-flowing vehicular traffic at the Bernal Avenue ramps to/from I-680 and bicycle/pedestrian traffic on the Bernal Avenue bike lane/ sidewalk.

(b) *Preferred Plan.* The cumulative bicycle and pedestrian impacts are similar to those of the Cooperative Plan.

**Impact J7d.** Potential for conflicts between free-flowing vehicular traffic at the Bernal Avenue ramps to/from I-680 and bicycle/pedestrian traffic on the Bernal Avenue bike lane/ sidewalk.

Same as for the Cooperative Plan.

(c) *Alternative 2.* The Alternative 2 plan has similar impacts to those of the Cooperative Plan and the Preferred Plan.

**Impact J7d.** Potential for conflicts between free-flowing vehicular traffic at the Bernal Avenue ramps to/from I-680 and bicycle/pedestrian traffic on the Bernal Avenue bike lane/ sidewalk.

Same as for the Cooperative Plan and the Preferred Plan.

## **5. Mitigation Measures**

**Impact J1a.** Project traffic would contribute to traffic volumes at the I-680 northbound offramp/Bernal Avenue intersection, resulting in LOS E and F during the AM and PM peak hours, respectively.

**Measure J1a.** Improve the I-680 northbound/Bernal Avenue intersection to provide for two right-turn lanes from Bernal Avenue to the northbound onramp when traffic turning right from Bernal onto the northbound onramp exceeds 1,550 vehicles per hour.

Implementation of Measure J1a would mitigate Impact J1 to a less-than-significant level.



**Impact J1b.** Project traffic would contribute to traffic volumes on Bernal Avenue through the Pleasanton Avenue intersection, potentially inhibiting access from Pleasanton Avenue to Bernal Avenue.

**Measure J1b.** Signalize the existing Pleasanton Avenue/Bernal Avenue intersection and coordinate the signal operations with the other signals on Bernal Avenue.

Implementation of Measure J1b would mitigate Impact J1b to a less-than-significant level.

**Impact J2.** Project traffic would contribute to traffic volumes at the I-680 NB onramp and SB offramp, contributing to unacceptable ramp service levels during the AM and PM peak hours.

**Measure J2a.** Improve the I-680 northbound onramp at Bernal Avenue from one lane to two lanes, subject to a reimbursement agreement with the City of Pleasanton; if the City has sufficient funds available when the improvement is needed, then the project sponsor may fund only the project's fair share of the improvement.

The second onramp lane would be needed when traffic volumes exceed 1,600 vehicles per lane per hour.

This intersection improvement would be subject to Caltrans review and approval, including additional CEQA review.

**Measure J2b.** Improve the I-680 southbound offramp when traffic volume on the ramp exceeds 1,440 vehicles per lane per hour or operation of the I-680/Bernal Avenue intersection reaches LOS E, subject to a reimbursement agreement with the City of Pleasanton; if the City has sufficient funds available when the improvement is needed, then the project sponsor may fund only the project's fair share of the improvement.

There are three alternative ramp improvements that could be implemented to mitigate project traffic. Figure 27 illustrates the lane geometries of each alternative, which are described below. Combinations of these three alternatives may also be appropriate to mitigate traffic conditions in this location. Like the improvement in Measure J2a, the ramp improvement project to be selected for Measure J2b is subject to Caltrans review and approval, including additional CEQA review as part of a PSR process. The three alternatives are believed to be appropriate to receive Caltrans approval and, therefore, to be feasible mitigations, although each design would not meet all current Caltrans standards.

- *Interchange Alternative 1* includes a new southbound offramp for westbound Bernal Avenue traffic exiting I-680, two right-turn lanes for the southbound loop offramp to eastbound Bernal Avenue, and dual left-turn lanes for westbound Bernal Avenue onto the I-680 southbound onramp. Implications of this alternative are:
  - *Bernal Avenue modifications:* A seven-lane cross-section would be needed on Bernal Avenue under the freeway overpass to accommodate the vehicle storage needs at each intersection along with the lane transitions required to avoid the overpass columns. Minor realignment of Bernal Avenue would be needed to accommodate the left-turn lane requirements and right-turn lane requirements at the freeway ramp intersections.

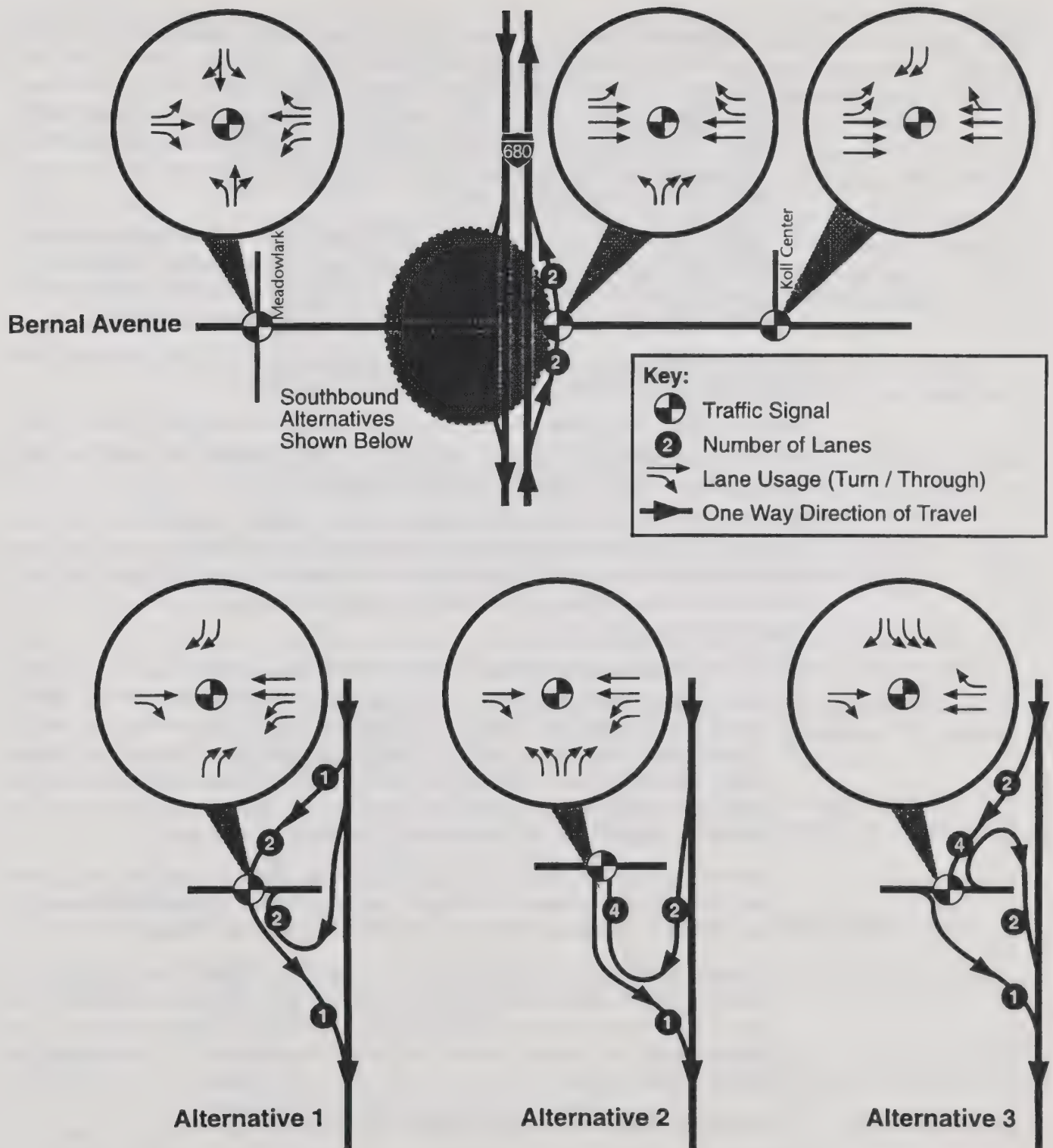


Figure 27

## Bernal/I-680 Interchange Options

Source: Fehr & Peers Associates



- **Freeway modifications:** The successive offramp design (separate exits for westbound and eastbound Bernal Avenue traffic) requires one gore point on the freeway and a second gore point on the offramp, to divide eastbound from westbound traffic (gore points are the points at which the offramp leaves the freeway mainline). This design may require widening of the freeway bridge over the Arroyo de la Laguna north of the interchange. (The need for widening would be determined at the preliminary engineering stage).
- **Pedestrian facilities:** Pedestrians would be required to walk along the north side of Bernal Avenue under the I-680 overcrossing. The pedestrian walk would be located behind the overcrossing columns. See also Measure J7d(1), which would direct pedestrian use to one side of Bernal Avenue under the overcrossing.

Interchange Alternative 1 would result in AM peak hour LOS D and a PM peak hour LOS C under the buildout condition with no WLP interchange.

As noted on p. 198, separate environmental review would be required for this ramp improvement project. That review would be expected to address, at a minimum, the issues of noise, cultural resources, biological resources, and visual resources.

- **Interchange Alternative 2** includes maintaining the existing southbound loop ramp configuration but widening the offramp to provide for two left-turn lanes and two right-turn lanes. As with Interchange Alternative 1, the westbound left turn from Bernal Avenue to the southbound I-680 onramp would be widened to two lanes. Implications of this alternative are:
  - **Bernal Avenue modifications:** Cross section and realignment would be the same as in Interchange Alternative 1. Even with the seven-lane cross-section, vehicle storage space would be inadequate. Eastbound through lane storage on Bernal Avenue would extend back from the southbound ramp signal beyond the Arroyo bridge (about 930 feet). Similarly, westbound vehicle storage needs would extend back under the overcrossing about 430 feet; only 280 feet is available, however, so vehicles waiting to turn left would block the southerly through lane.
  - **Interchange modifications:** The southbound loop offramp in the southwest quadrant of the interchange would be enlarged to provide adequate storage for traffic exiting the offramp and stopping at the signalized intersection at Bernal Avenue.
  - **Freeway modifications:** Only one offramp gore point would be needed for southbound traffic on I-680, making freeway signage simpler than in Interchange Alternative 1 and avoiding reconstruction of the Arroyo de la Laguna crossing. The southbound offramp modifications would require widening of the overcrossing at Bernal Avenue.
  - **Pedestrian facilities:** Same as Interchange Alternative 1.

The analysis indicates that the intersection would operate at LOS D in the AM peak hour and LOS E in the PM peak hour under the buildout condition with no WLP interchange. The extensive vehicle queuing, however, indicate that perceived operations will be service level F during both peak periods.

Additional CEQA review, covering at least the topics identified for Alternative 1, would be required.

- **Interchange Alternative 3** is a partial cloverleaf design, including a new southbound offramp from I-680 intersecting Bernal Avenue at a signalized intersection. The offramp would provide for three left-turn lanes for eastbound Bernal Avenue traffic and one right-turn lane for westbound Bernal traffic. A southbound loop onramp to I-680 would be provided for westbound Bernal Avenue. The existing direct onramp for eastbound Bernal Avenue traffic turning right onto the freeway would be maintained.
- **Bernal Avenue modifications:** Bernal Avenue would have a six-lane cross-section. This proposal would resolve the Bernal Avenue vehicle storage constraints with the six-lane cross-section (compared to a seven-lane cross-section in Interchange Alternative 1), because most of the vehicle storage will occur on the southbound offramp in one of the three left-turn lanes.
- **Interchange modifications:** The proposed design, with triple left-turn lanes at the southbound offramp, is feasible, but the effectiveness of the three turn lanes would be reduced when traffic in the area is congested.
- **Freeway modifications:** The modified interchange provides only one gore point for southbound traffic exiting the freeway. This proposal requires reconstruction of the overcrossing at Bernal Avenue and possible widening of the I-680 bridge over the Arroyo de la Laguna (north of the interchange) to accommodate the loop onramp and the two-lane offramp. Even with modifications, the loop onramp would not meet Caltrans standards for new construction.
- **Pedestrian facilities:** Pedestrians could walk safely on either side of Bernal Avenue. Pedestrian facilities on the south side of the street are preferred, however.

This proposal would provide LOS D intersection operations during both the AM and PM peak hours under the buildout condition with no WLP interchange. The condition resolves much of the surface street queuing problems from Alternative 2.

Like Alternatives 1 and 2, this ramp improvement would require separate environmental review that would cover, at a minimum, impacts on noise, cultural resources, biological resources, and visual resources.

Implementation of Measures J2a through J2b would mitigate Impact J2 to a less-than-significant level.

Impact J3. Project traffic would contribute to freeway traffic volumes that exceed acceptable levels on the regional transportation system.

**Measure J3. Require the project sponsor to pay regional transportation impact fees, when such fees are adopted by the Tri-Valley Council.**

Payment of a fee alone cannot reduce Impact J3 to a less-than-significant level; application of the collected funds to pay for transportation improvements is required. Therefore, Impact J3 is a significant unavoidable impact. There is no feasible mitigation.

Reducing the amount of residential development permitted on the site from 1,900 to 1,600 housing units would reduce site-generated traffic by 5 to 10 percent. This reduction would commensurately reduce the



amount of fees paid by the project sponsor, but would have a negligible effect on regional traffic operations.

**Impact J4a.** Traffic levels would exceed residential street capacity on the West Parcel access road from Bernal Avenue south through the northernmost residential subdivision.

**Measure J4a.** Design residential development on the West Parcel so that it does not have direct driveway access onto streets that have traffic volume greater than 3,000 vehicles per day.

Implementation of Measure J4a would mitigate Impact J4a to a less-than-significant level.

**Impact J4b.** Traffic levels would exceed residential street capacity on neighborhood streets in the Central Parcel. (Preferred Plan)

**Measure J4b.** Design residential development on the Central Parcel so that it does not have direct driveway access onto streets that have traffic volume greater than 3,000 vehicles per day.

This mitigation measure is not required if Measure J5c is implemented.

Implementation of Measure J4b (or Measure J5c) would mitigate Impact J4b to a less-than-significant level.

**Impact J4c.** Traffic levels would exceed residential street capacity on neighborhood streets in the East Parcel. (Preferred Plan)

**Measure J4c.** Design residential development on the East Parcel so that it does not front directly onto Junipero Street between the Union Pacific railroad tracks and Case Avenue.

Implementation of Measure J4c would mitigate Impact J4c to a less-than-significant level.

**Impact J5a.** The signalized access to/from Bernal Avenue could conflict with fairgrounds access and through traffic on Bernal Avenue.

**Measure J5a.** Coordinate the traffic signal installations along Bernal Avenue with fairgrounds personnel. Provide traffic signal interconnect between all signals on Bernal Avenue to minimize delay to through traffic on Bernal Avenue.

Implementation of Measure J5a would mitigate Impact J5a to a less-than-significant level.

**Impact J5b.** Existing mature trees within the Bernal Avenue median could limit sight distances at the signalized access to/from Bernal Avenue and could limit the design of left-turn access to the Central Parcel.

**Measure J5b.** Design the signalized access points on Bernal Avenue so as to maximize sight distance and minimize damage to the median trees.

Implementation of Measure J5b would mitigate Impact J5b to a less-than-significant level.

**Impact J5c.** Vehicle circulation may be compromised around the Village Green Loop. (Preferred Plan)

**Measure J5c.** Construct the “Revised Preferred Plan,” which improves circulation around the Village Green Loop, adds a signalized intersection access to Bernal Avenue, and adds an internal connector road between the Pleasanton Avenue Extension and the Mid Access Road.

Figure 28 illustrates the traffic circulation with the Revised Preferred Plan.

With this mitigation measure, Impact J5c and Impact J4c would be reduced to a less-than-significant level.

**Impact J5d.** A circulation pattern providing only one westbound egress from the commercial area of the site (at the Valley Avenue/Bernal Avenue intersection) may inhibit traffic egress from the project site if that location is obstructed as a result of congestion or traffic incidents. (Preferred Plan)

**Measure J5d.** Construct the “Revised Preferred Plan,” which improves circulation around the Village Green Loop, adds a signalized intersection access to Bernal Avenue, and adds an internal connector road between the Pleasanton Avenue Extension and the Mid Access Road.

Same as Measure J5c.

Implementation of Measure J5d would mitigate Impact J5d to a less-than-significant level.

**Impact J5e.** Roundabouts in the circulation plan, if not properly designed, could cause driver confusion with respect to right-of-way and cause adverse effects on traffic safety, emergency vehicle access/response times, transit bus circulation, and delivery vehicle circulation. (Preferred Plan)

**Measure J5e.** Design the traffic roundabouts according to the recommended ITE practices and accommodate traffic flows at 15 to 20 mph. Place “Yield” signs at the approaches to the roundabouts and provide clearly marked pedestrian crosswalks.

Implementation of Measure J5e would mitigate Impact J5e to a less-than-significant level.



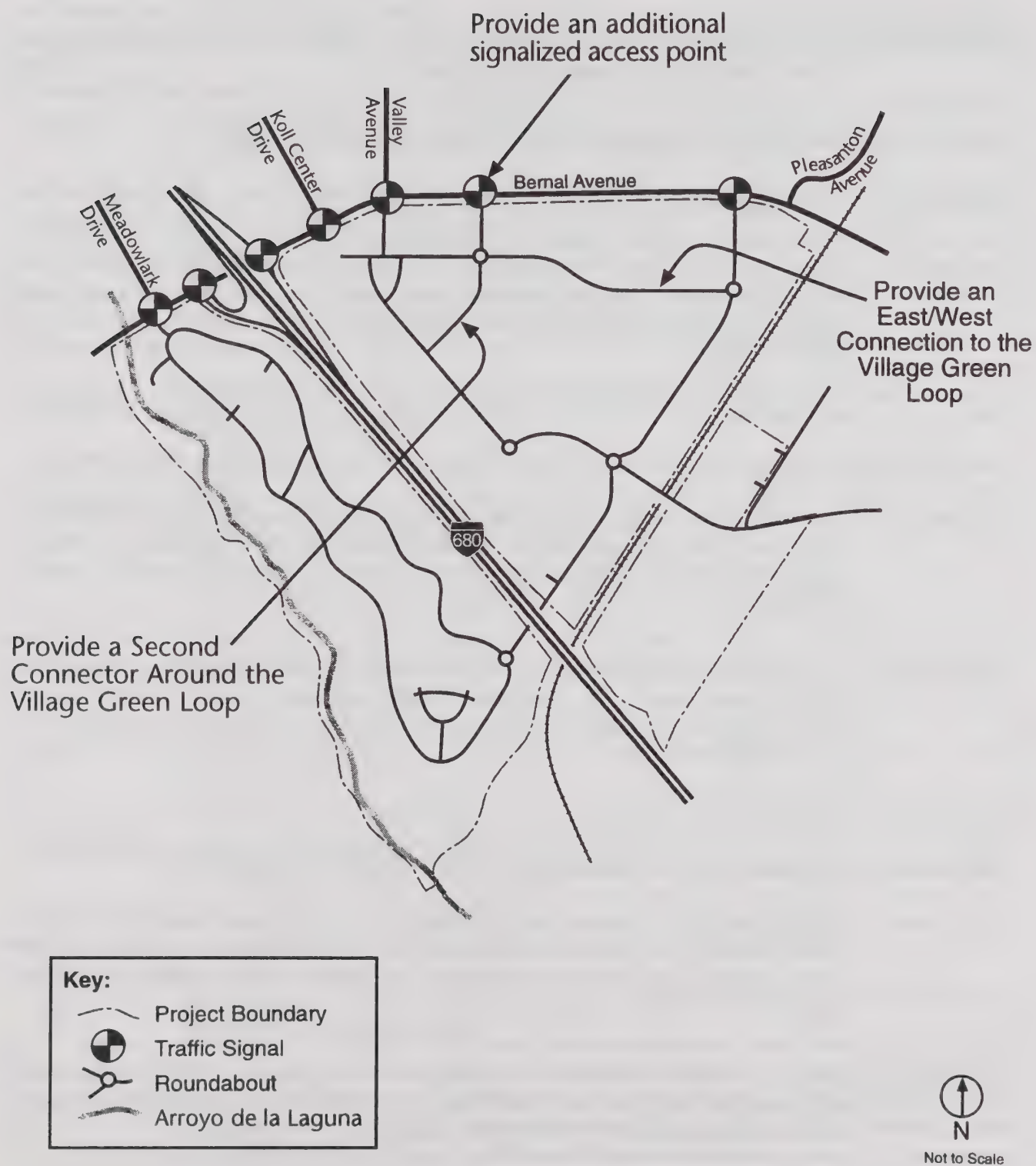


Figure 28  
**Mitigated Circulation Plan  
 (Revised Preferred Plan)**

**Impact J5f.** Street cross-sections for some road segments on the West Parcel are inconsistent with circulation needs. (Preferred Plan)

**Measure J5f.** Design street cross-sections for the commercial/civic/residential component of the West Parcel to conform to connector road standards rather than neighborhood street standards.

“Civic” uses include public, quasi-public, institutional, and commercial recreation uses.

Implementation of Measure J5f would mitigate Impact J5f to a less-than-significant level.

**Impact J6.** Major fairgrounds events that draw a large attendance may cause shortages of onstreet parking within the project site, resulting in a significant parking impact.

**Measure J6.** Implement parking restrictions in areas of the project that may be affected by fairgrounds parking overflow.

Implementation of Measure J6 would mitigate Impact J6 to a less-than-significant level.

**Impact J7a.** Traffic associated with site development may cause increased vehicular conflicts with bicycle and pedestrian traffic on existing and planned bike facilities in the vicinity of the project site.

**Measure J7a(1).** Maintain a Class I bike lane on Bernal Avenue along the project site frontage.

Special design considerations will be required where the Class I facility intersects with site access roads and driveways. Design components that should be considered include stop signs for the bike facility approaches and bollards to slow bicycle riders.

**Measure J7a(2).** Provide the necessary traffic controls to maintain safe bicycle and pedestrian circulation along Bernal Avenue through the I-680 interchange area.

Traffic controls are dependent on the interchange modification alternative chosen (refer to Measure J2b) and must be approved by the City Traffic Engineer. These may include traffic signals to control right-turning traffic exiting from the freeway or redirecting pedestrian and bicycle activity to one side of Bernal Avenue.

Implementation of Measures J7a(1) and J7a(2) would mitigate Impact J7a to a less-than-significant level.



**Impact J7b.** Development of any Central or East Parcel residential use that occurs prior to the proposed grade separation would create the potential for pedestrian conflicts, especially involving school children, with the Union Pacific railroad tracks.

**Measure J7b.** If residential development occurs on the Central or East Parcel before the grade separation between Valley Avenue (Cooperative Plan) or Junipero Street (Preferred Plan) and the UPRR tracks is in place, construct fencing along the Union Pacific railroad tracks through the project site to reduce the likelihood that school children will cross the tracks to get to the existing and proposed schools along Case Avenue.

Implementation of Measure J7b would mitigate Impact J7b to a less-than-significant level.

**Impact J7c.** Street design that includes roundabouts and traffic circles would create the potential for bike and pedestrian conflicts with motor vehicles. (Preferred Plan)

**Measure J7c(1).** Design the traffic roundabouts according to the recommended ITE practices and accommodate traffic flows at 15 to 20 mph. Place "Yield" signs at the approaches to the roundabouts and provide clearly marked pedestrian crosswalks.

Same as Measure J5e.

**Measure J7c(2).** Design traffic circles to have appropriate dimensions and traffic control signage for bicycle safety.

Implementation of Measures J7c(1) and J7c(2) would mitigate Impact J7c to a less-than-significant level.

**Impact J7d.** Potential for conflicts between free-flowing vehicular traffic at the Bernal Avenue ramps to/from I-680 and bicycle/pedestrian traffic on the Bernal Avenue bike lane/sidewalk.

**Measure J7d(1).** Direct pedestrian movements to one side of Bernal Avenue only to minimize crossing of freeway ramps.

**Measure J7d(2).** Construct dual right-turn lane freeway ramps to include a signalized "demand-activated" crossing for pedestrians and bicyclists.

**Measure J7d(3).** During interchange redesign, consider designs that direct bicycle traffic to use sidewalks through the Bernal Avenue interchange.

Measures J7d(1) through J7d(3) should be coordinated with Measure J7a(2).

Implementation of Measures J7d(1) or J7d(2) and J7d(3) would mitigate Impact J7d to a less-than-significant level.

**Impact J8.** Construction-related vehicles may impede normal traffic movements and damage existing roads.

**Measure J8.** Prior to beginning grading or construction on the site, the applicant shall prepare for approval by the City of Pleasanton a Construction Phasing and Management Plan.

At a minimum, the Construction Phasing and Management Plan shall include:

- A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak hours *and* to avoid the three largest-attendance events at the Alameda County Fairgrounds (i.e., the County Fair, the Good Guys, and the Scottish Games); lane closure procedures and flagger stations; locations of signs, cones, and other warning devices for drivers; use of steel plates to maintain traffic operation of through lanes.
- Location of construction staging areas on the project site.
- Maintenance of through traffic on Bernal Avenue.
- Provision of monitoring of Pleasanton streets used for haul routes so that any damage attributable to heavy trucks can be identified and the applicant can be required to pay proportionally for repair (overlay or repair to structural section).
- Modification of Valley/Bernal traffic signal to add northbound and southbound movements, if this intersection is along the recommended route for construction access and egress.

Implementation of Measure J8 would mitigate Impact J8 to a less-than-significant level.

**Impact J9.** Project traffic would contribute to cumulative traffic growth on the road network and freeway ramps in the vicinity of the project site.

**Measure J9a.** Require the project sponsor to make a fair share contribution to the City road network in the vicinity of the project to its ultimate design by payment of City traffic impact fees.

**Measure J9b.** Require the project sponsor to develop and implement a Transportation System Management Plan (TSMP) in accordance with the City of Pleasanton TSM ordinance.

Implementation of Measures J9a and J9b would mitigate Impact J9 to a less-than-significant level.

**Impact J10.** Project traffic would contribute to cumulative traffic growth on the regional transportation system.

**Measure J10.** Require the project sponsor to make a fair share contribution to regional transportation improvements by paying impact fees, when such fees are adopted by the Tri-Valley Council.

Same as Measure J3.

Payment of a fee cannot reduce Impact J10 to a less-than-significant level. Therefore, Impact J10 is a significant unavoidable impact. There is no feasible mitigation.



## **6. Summary Comparison of Impacts and Mitigated Impacts: Transportation.**

	<b>Cooperative Plan</b>	<b>Preferred Plan (Alternative 1)</b>
<b>Impact J1a.</b> Project traffic would contribute to traffic volumes at the I-680 northbound offramp/Bernal Avenue intersection, resulting in LOS E and F during the AM and PM peak hours, respectively.	S/LS	S/LS
<b>Impact J1b.</b> Project traffic would contribute to traffic volumes on Bernal Avenue through the Pleasanton Avenue intersection, potentially inhibiting access from Pleasanton Avenue to Bernal Avenue.	S/LS	S/LS
<b>Impact J2.</b> Project traffic would contribute to traffic volumes at the I-680 NB onramp and SB offramp, contributing to unacceptable ramp service levels during the AM and PM peak hours.	S/LS	S/LS
<b>Impact J3.</b> Project traffic would contribute to freeway traffic volumes that exceed acceptable levels on the regional transportation system.	S/S	S/S
<b>Impact J4a.</b> Traffic levels would exceed residential street capacity on the West Parcel access road from Bernal Avenue south through the northernmost residential subdivision.	S/LS	S/LS
<b>Impact J4b.</b> Traffic levels would exceed residential street capacity on neighborhood streets in the Central Parcel.	n.a.	S/LS
<b>Impact J4c.</b> Traffic levels would exceed residential street capacity on neighborhood streets in the East Parcel.	n.a.	S/LS
<b>Impact J5a.</b> The signalized access to/from Bernal Avenue could conflict with fairgrounds access and through traffic on Bernal Avenue.	S/LS	S/LS
<b>Impact J5b.</b> Existing mature trees within the Bernal Avenue median could limit sight distances at the signalized access to/from Bernal Avenue and could limit the design of left-turn access to the Central Parcel.	S/LS	S/LS
<b>Impact J5c.</b> Vehicle circulation may be compromised around the Village Green Loop.	n.a.	S/LS

Key: \*/\*: significance before mitigation/significance after mitigation.

S: significant (C): contributes to cumulative impact

LS: less than significant n.a.: impact does not apply to this alternative

\* no mitigation required ND: not determinable

† Less than significant before mitigation, but contributes to cumulatively significant impact.

NM: no mitigation possible (beyond policies, programs, and other regulations already in place).

	Cooperative Plan	Preferred Plan (Alternative 1)
<b>Impact J5d.</b> A circulation pattern providing only one westbound egress from the commercial area of the site (at the Valley Avenue/ Bernal Avenue intersection) may inhibit traffic egress from the project site if that location is obstructed as a result of congestion or traffic incidents.	n.a.	S/LS
<b>Impact J5e.</b> Roundabouts in the circulation plan, if not properly designed, could cause driver confusion with respect to right-of-way and cause adverse effects on traffic safety, emergency vehicle access/ response times, transit bus circulation, and delivery vehicle circulation.	n.a.	S/LS
<b>Impact J5f.</b> Street cross-sections for some road segments on the West Parcel are inconsistent with circulation needs.	n.a.	S/LS
<b>Impact J6.</b> Major fairgrounds events that draw a large attendance may cause shortages of onstreet parking within the project site, resulting in a significant parking impact.	S/LS	S/LS
<b>Impact J7a.</b> Existing and planned bike lanes in the vicinity of the project site may be affected by site development resulting in significant project impacts.	S/LS	S/LS
<b>Impact J7b.</b> Development of any Central or East Parcel residential use that occurs prior to the proposed grade separation would create the potential for pedestrian conflicts, especially involving school children, with the Union Pacific railroad tracks.	S/LS	S/LS
<b>Impact J7c.</b> Street design that includes roundabouts and traffic circles would create the potential for bike and pedestrian conflicts with motor vehicles.	n.a.	S/LS
<b>Impact J7d.</b> Potential for conflicts between free-flowing vehicular traffic at the Bernal Avenue ramps to/from I-680 and bicycle/pedestrian traffic on the Bernal Avenue bike lane/sidewalk.	S/LS	S/LS

Key: \*/\*: significance before mitigation/significance after mitigation.  
S: significant (C): contributes to cumulative impact  
LS: less than significant n.a.: impact does not apply to this alternative  
\* no mitigation required ND: not determinable  
† Less than significant before mitigation, but contributes to cumulatively significant impact.  
NM: no mitigation possible (beyond policies, programs, and other regulations already in place).



	Cooperative Plan	Preferred Plan (Alternative 1)
<b>Impact J8.</b> Construction-related vehicles may impede normal traffic movements and damage existing roads.	S/LS	S/LS
<b>Impact J9.</b> Project traffic would contribute to cumulative traffic growth on the road network and freeway ramps in the vicinity of the project site.	S (C)/LS	S (C)/LS
<b>Impact J10.</b> Project traffic would contribute to cumulative traffic growth on the regional transportation system.	S (C)/S	S (C)/S

Key: \*/\*: significance before mitigation/significance after mitigation.

S: significant

(C): contributes to cumulative impact

LS: less than significant

n.a.: impact does not apply to this alternative

\* no mitigation required

ND: not determinable

†

Less than significant before mitigation, but contributes to cumulatively significant impact.

NM: no mitigation possible (beyond policies, programs, and other regulations already in place).

## **K. AIR QUALITY**

### **1. Setting**

#### **a. Air Basin Characteristics**

The Livermore-Amador Valley forms a small subregional air basin distinct from the larger Bay Area Air Basin. The air basin is surrounded on all sides by high hills or mountains. Significant breaks in the hills surrounding the air basin are Niles Canyon and the San Ramon Valley, which extends northward into Contra Costa County.

The terrain of the Livermore-Amador Valley influences both the climate and air pollution potential of the subregional air basin. As an inland, protected valley, the area has generally lighter winds and a higher frequency of calm conditions when compared to the greater Bay Area.

The occurrence of episodes of high atmospheric stability, known as inversion conditions, severely limits the ability of the atmosphere to disperse pollutants vertically. Inversions can be found during all seasons in the Bay Area, but are particularly prevalent in the summer months when they are present about 90 percent of the time in both morning and afternoon.

The Livermore-Amador subregional air basin is generally downwind of the greater Bay Area, and therefore is subject to pollutants transported to the area by prevailing winds.

The terrain, meteorological characteristics and downwind location of the Livermore-Amador subregional air basin give it a high potential for air pollution, particularly for photochemical pollutants (ozone)

#### **b. Pollutant Characteristics and Air Quality Standards**

Both the U. S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards address what are called "criteria" pollutants. Table 40 identifies these criteria pollutants, their characteristics, health effects and typical sources.

The federal and California state ambient air quality standards are summarized in Table 41 for important pollutants. The federal and state ambient standards were developed to avoid health-related effects. The federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and particulate matter (PM-10).

The U.S. Environmental Protection Agency has recently proposed revisions to the federal standards for ozone and particulate matter. It is proposed that the current 1-hour ozone standard be replaced by a new, lower 8-hour standard. The US Environmental Protection Agency (EPA) is proposing to add a 24-hour and annual standard for particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>). EPA is currently soliciting comments on these proposed new standards and alternatives, and the final rules are expected by June 28, 1997.



**Table 40**  
**Major Criteria Pollutants**

<b>Pollutant</b>	<b>Characteristics</b>	<b>Health Effects</b>	<b>Major Sources</b>
<b>Ozone</b>	A highly reactive photochemical pollutant created by the action of sunshine on ozone precursors (primarily reactive hydrocarbons and oxides of nitrogen). Often called photochemical smog.	<ul style="list-style-type: none"> <li>• Eye irritation</li> <li>• Respiratory function impairment.</li> </ul>	Combustion sources, such as factories and automobiles, and evaporation of solvents and fuels.
<b>Carbon Monoxide</b>	An odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels.	<ul style="list-style-type: none"> <li>• Impairment of oxygen transport in the bloodstream.</li> <li>• Aggravation of cardiovascular disease.</li> <li>• Fatigue, headache, confusion, dizziness.</li> <li>• Can be fatal in the case of very high concentrations.</li> </ul>	Automobile exhaust, combustion of fuels, combustion of wood in wood stoves and fireplaces.
<b>Nitrogen Dioxide</b>	Reddish-brown gas that discolors the air, formed during combustion.	<ul style="list-style-type: none"> <li>• Increased risk of acute and chronic respiratory disease.</li> </ul>	Automobile and diesel truck exhaust, industrial processes, fossil-fueled power plants.
<b>Sulfur Dioxide</b>	<p>A colorless gas with a pungent, irritating odor.</p> <ul style="list-style-type: none"> <li>• Aggravation of chronic obstruction lung disease.</li> <li>• Increased risk of acute and chronic respiratory disease.</li> </ul>	<ul style="list-style-type: none"> <li>• Aggravation of chronic obstruction lung disease.</li> <li>• Increased risk of acute and chronic respiratory disease.</li> </ul>	Diesel vehicle exhaust, oil-powered power plants, industrial processes.
<b>PM-10</b>	Solid and liquid particles of dust, soot, aerosols and other matter which are small enough to remain suspended in the air for a long period of time.	<ul style="list-style-type: none"> <li>• Aggravation of chronic disease and heart/lung disease symptoms.</li> </ul>	Combustion, automobiles, field burning, factories and unpaved roads. Also a result of photochemical processes.

Source: Donald M. Ballanti, Consulting Meteorologist

**Table 41**  
**Federal and State Ambient Air Quality Standards**

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-hour	0.12 ppm	0.09 ppm
Carbon monoxide	8-hour	9.0 ppm	9.0 ppm
	1-hour	35.0 ppm	20.0 ppm
Nitrogen dioxide	annual	0.05 ppm	--
	1-hour	--	0.25 ppm
Sulfur dioxide	annual	0.03 ppm	--
	24-hour	0.14 ppm	0.05 ppm
	1-hour	--	0.5 ppm
PM-10	annual	50 $\mu\text{g}/\text{m}^3$	30 $\mu\text{g}/\text{m}^3$
	24-hour	150 $\mu\text{g}/\text{m}^3$	50 $\mu\text{g}/\text{m}^3$
Lead	30-day avg.	--	1.5 $\mu\text{g}/\text{m}^3$
	month avg.	1.5 $\mu\text{g}/\text{m}^3$	--

ppm = parts per million

 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meterSource: California ARB, *California Air Quality Data, Annual Summary*, Vol. XXV, 1994

### **c. Attainment Status**

The federal Clean Air Act and the California Clean Air Act of 1988 require that the State Air Resources Board, based on air quality monitoring data, designate air basins within the state where the federal or state ambient air quality standards are not met as "nonattainment areas". Because of the differences between the federal and state standards, the designation of nonattainment areas is different under the federal and state legislation. The San Francisco Bay Air Basin was recently redesignated by the U.S. Environmental Protection Agency as a "maintenance area" for ozone. "Maintenance Area" status requires long term planning to maintain the ambient air quality standards. The "Urbanized Area" of the air basin is still considered "nonattainment" for carbon monoxide (however, a request for redesignation to "maintenance area" has been submitted jointly by the BAAQMD, Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) to the U. S. Environmental Protection Agency). The San Francisco Bay air basin is designated an attainment area or is unclassified for all other national ambient air quality standards.

The proposed revisions to the national ambient standards for ozone and particulate matter have no immediate effect on nonattainment planning. Existing ozone and particulate matter designations will remain in effect until EPA establishes new designations based on any new ozone or particulate matter standard. Final promulgation of guidance for development of nonattainment plans for any new ozone or particulate matter standard is scheduled for June of 1999.



Under the California Clean Air Act the entire San Francisco Bay Air Basin is a nonattainment area for ozone and PM-10. The air basin is either attainment or unclassified for other pollutants based on state air quality standards.

#### **d. Current Air Quality**

The Bay Area Air Quality Management District operates a network of air monitoring sites within the Bay Area. The closest BAAQMD air monitoring site to the project site is located in Livermore. Table 42 shows a summary of air quality data for this monitoring site for the period 1991-1995. Data is shown for ozone, carbon monoxide, PM-10 and nitrogen dioxide. The number of days exceeding each standard are shown for each year.

**Table 42**  
**Air Quality Data for Livermore, 1991-1995**

Pollutant	Standard	Days Exceeding Standard In:				
		1991	1992	1993	1994	1995
Ozone	Federal 1-Hour	1	0	1	2	7
	State 1-Hour	17	14	7	5	20
Carbon Monoxide	State/Federal 8-Hour	0	0	0	0	0
PM-10	State 24-Hour	12	5	3	4	1
	Federal 24-Hour	1	0	0	0	0
Nitrogen Dioxide	State 1-Hour	0	0	0	0	0

Source: *BAAQMD CEQA Guidelines: Assessing the Air Quality Impacts of Projects and Plans*, Bay Area Air Quality Management District, April 1996

No violations of federal standards have occurred in Livermore with the exception of the federal ozone standard. Despite the violations recorded in 1993-1995, the region is still considered a maintenance area, rather than a nonattainment area for this pollutant. The state standards are generally met with the exception of the state standards for ozone and PM-10.

## **2. Impacts**

### **a. Significance Criteria**

The basic significance criteria used in this report are that an effect is significant if it would:

- Violate any ambient air quality standard
- Contribute substantially to an existing or projected air quality violation
- Expose sensitive receptors to substantial air pollutant concentrations.

Existing sensitive receptors near the project site include residences and the Pleasanton Middle School. The elementary school on the site provided in each plan alternative and residences created by the proposed project would be new sensitive receptors.

The BAAQMD has developed specific measures of significance for air quality impacts of projects. According to BAAQMD guidance<sup>61</sup>, a project would have a significant effect if:

- For carbon monoxide, dispersion modeling shows that the project would contribute to a violation of the one- or eight-hour State or Federal standards.
- For regional pollutants (Reactive Organic Gases, Nitrogen Oxides or PM-10), total emissions from project operations exceed 80 pounds per day or 15 tons per year.

#### **b. Impacts of the Cooperative Plan and the Preferred Plan**

**(1) Generation of Construction-Related Emissions.** Construction activities are a source of organic gas emissions. Solvents in adhesives, non-waterbase paints, thinners, some insulating materials and caulking materials would evaporate the atmosphere and would participate in the photochemical reaction that creates urban ozone. Asphalt used in paving is also a source of organic gases for a short time after its application.

Construction air quality impacts would be due to dust generated by equipment and vehicles. Fugitive dust is emitted both during construction activity and as a result of wind erosion over exposed earth surfaces. Grading and earthmoving activities comprise the major source of construction dust emissions, but traffic and general disturbance of the soil also generate dust emissions.

The effects of construction activities would be increased dustfall and locally elevated levels of PM-10 near the site of construction activity. Depending on the weather, soil conditions, the amount of activity taking place, and nature of dust control efforts these impacts, could affect existing sensitive receptors near the project or within previously-completed portions of the project site. Without mitigation, project construction impacts are considered to be a temporary potentially significant impact within a localized area.

**Impact K1. Construction activities would generate dust and PM-10, creating the potential for nuisance.**

**(2) Effects on Local Carbon Monoxide Concentrations.** On the local scale, the pollutant of greatest interest is carbon monoxide. Concentrations of this pollutant are related to the levels of traffic and congestion along streets and at intersections.

The CALINE-4 computer simulation model was applied to eight intersections near the project site. These intersections were selected on the basis of PM peak hour Level of Service. All would operate at Level of Service D for one or more of the traffic scenarios at some time in the future (that is, with the project and existing plus approved development, which is the future condition for project impact analysis, or with the project and existing plus buildout development, which is the condition for the cumulative analysis). The CALINE-4 program and the assumptions made in its use are described in Appendix D.

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<sup>61</sup> BAAQMD CEQA GUIDELINES: Assessing the Air Quality Impacts of Projects and Plans, Bay Area Air Quality Management District, April 1996.



The results of the CALINE-4 modeling for the eight selected intersections are shown in Table 43. Concentrations are shown for three scenarios:

- Existing traffic plus approved projects (2000);
- Existing traffic plus approved projects plus proposed project (2000);
- Buildout of City of Pleasanton General Plan with proposed project (2010).

In these scenarios, the “proposed project” is *either* the Cooperative Plan or the Preferred Plan.

**Table 43**  
**Predicted Worst-Case Carbon Monoxide Concentrations at Selected Intersections**  
**(Parts Per Million)**

Intersection	Existing + Approved (2000)		Existing + Approved + Project* (2000)		General Plan Buildout + Project* (2010)	
	1-Hr	8-Hr	1-Hr	8-Hr	1-Hr	8-Hr
319 Hopyard at Valley	10.8	6.7	11.1	6.9	6.1	3.6
342 Bernal at First/Sunol	9.0	6.1	10.0	6.2	6.3	3.8
352 Bernal at I-680 SB Ramps	8.8	5.3	11.0	6.9	6.1	3.6
353 Bernal at Valley	11.8	7.4	12.8	8.1	6.9	4.2
425 Bernal at Case	8.5	5.1	9.2	5.6	5.4	3.1
457 Bernal at Pleasanton	8.7	5.2	9.2	5.6	5.7	3.3
497 Sunol at Junipero	8.0	4.8	8.4	5.0	5.6	3.3
844 SFW Mid Access at Bernal	–	–	9.3	5.7	6.0	3.6
Most Stringent Standard	20.0	9.0	20.0	9.0	20.0	9.0

\* “Project” is either Cooperative Plan or Preferred Plan.

Source: Donald M. Ballanti, Certified Consulting Meteorologist

The concentrations in Table 43 are to be compared to the state and federal ambient 1-hour air quality standards of 20 PPM and 35 PPM. Predicted 8-hour concentrations in Table 43 are to be compared to the state and federal 8-hour standards of 9 PPM.

Concentrations in 2000 with traffic from approved projects meet all ambient air quality standards. The addition of project traffic would increase concentrations by as much as 2.2 PPM for the 1-hour averaging time and 1.6 PPM for the 8-hour averaging time, but concentrations would remain well below the applicable standards. Note that this is a worst-case scenario, since full buildout of the project *and* approved-but-unbuilt projects would not occur by year 2000. (Full development of the project is not expected until about 2010.)

Concentrations in 2010 assuming buildout of the Pleasanton General Plan would be lower than year 2000 concentrations, despite increased traffic, due to anticipated reductions in emission rates for vehicles resulting from state-mandated emission control programs for automobiles. Concentrations would remain well below

the applicable standards. The impact of the project on local carbon monoxide concentrations is considered to be less-than-significant.

Traffic generated by the project would contribute to local carbon monoxide concentrations. Concentrations would remain below state and federal standards, so this impact is less than significant.

**(3) New Regional Emissions.** Development of the project site would impact regional air quality. The effect of development would be primarily indirect, i.e., related to vehicle trips attracted to or generated by residential, commercial, office and other land uses.

Project-related automobile emissions have been calculated using the URBEMIS-5 computer program developed by the California Air Resources Board. The incremental daily emission associated with project-related traffic is shown in Table 44 below for reactive hydrocarbons and oxides of nitrogen (two precursors of ozone) and PM-10. A description of the URBEMIS-5 model, the assumptions made in its use are included in Appendix D.

**Table 44**  
**Project Regional Emissions in Pounds Per Day**

Alternative	Reactive Organic Gases	Nitrogen Oxides	PM-10
Cooperative Plan/Preferred Plan	394.8	382.0	374.4
Alternative 2	390.6	377.4	370.2
BAAQMD Threshold of Significance	80.0	80.0	80.0

Source: Donald M. Ballanti, Certified Consulting Meteorologist

Guidelines for the evaluation of project impacts issued by the Bay Area Air Quality Management District consider emission increases to be significant if they exceed 80 pounds per day for regional pollutants.<sup>62</sup> Project emissions shown in Table 44 would exceed the criterion for all three pollutants, so the project is considered to have a significant effect on regional air quality.

**Impact K2.** The project would contribute to regional emissions well in excess of the thresholds of significance recommended by the Bay Area Air Quality Management District.

### **c. Impacts of Alternative 2**

**(1) Generation of Construction-Related Emissions.** Construction impacts of this alternative would be very similar to those associated with the Cooperative Plan and the Preferred Plan. Construction air quality impacts would be potentially significant.

<sup>62</sup> Bay Area Air Quality Management District, *Air Quality and Urban Development – Guidelines*, 1985.



**Impact K1.** Construction activities would generate dust and PM-10, creating the potential for nuisance.

Same as for the Cooperative Plan and the Preferred Plan.

**(2) *Effects on Local Carbon Monoxide Concentrations.*** Separate CALINE-4 model runs for this alternative were not undertaken. Since the overall trip generation and distribution of vehicle trips for this alternative would be very similar to that of the Cooperative Plan and the Preferred Plan, carbon monoxide impacts can be expected to be similar to those shown in Table 44. The local carbon monoxide impacts of this alternative would represent a less than significant impact.

**(3) *New Regional Emissions.*** Automobile emissions associated with this alternative have been calculated using the URBEMIS-5 computer program developed by the California Air Resources Board. The incremental daily emission associated with traffic is shown in Table 44 for reactive hydrocarbons and oxides of nitrogen (two precursors of ozone) and PM-10. Emissions from this alternative are slightly less than those of either the Cooperative Plan or Preferred Plan.

Guidelines for the evaluation of project impacts issued by the Bay Area Air Quality Management District consider emission increases to be significant if they exceed 80 pounds per day for regional pollutants. Emissions shown in Table 44 would exceed the BAAQMD significance criterion for all three pollutants, so this alternative is considered to have a significant effect on regional air quality.

**Impact K2.** The project would contribute to regional emissions well in excess of the thresholds of significance recommended by the Bay Area Air Quality Management District.

Same as for the Cooperative Plan and the Preferred Plan.

#### **d. Impacts of Alternative 3**

Air quality impacts associated with Alternative 3 are described in the County EIR, Chapter 4.13.

### **3. Mitigation**

**Impact K1.** Construction activities would generate dust and PM-10, creating the potential for nuisance.

**Measure K1.** Prepare and implement a dust control plan for the construction period, which would control dust during all phases of construction, to be reviewed and approved by the City Public Works Department prior to development activity on the site.

The dust control plan should consider the following basic control measures:

- Water all active construction areas at least twice daily or as necessary to minimize dust.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites or as necessary to minimize dust.

- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously-graded areas inactive for 10 days or more).
- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.)
- Limit traffic speeds on unpaved roads 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.
- Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site.
- Install windbreaks, or plant trees/vegetative wind breaks at windward side(s) of construction areas.
- Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.
- Limit the area subject to excavation, grading and other construction activity at any one time.

The implementation of the above measures at construction sites would be expected to reduce construction air quality impacts, but not to a level that is less-than-significant during the mass grading phase of the project. These impacts would be temporary, however, and would abate with the end of mass site grading. Measure K1 would be expected to reduce the impacts of subsequent site-specific grading to a less-than-significant level.

**Impact K2.** The project would contribute to regional emissions well in excess of the thresholds of significance recommended by the Bay Area Air Quality Management District.

Employment-generating land uses within the project would be subject to the City of Pleasanton's Transportation Systems Management program.

Because the project would still generate regional emissions in excess of the significance thresholds even with the included land use strategies and conformance to the City's TSM program, additional measures are recommended as follows:

**Measure K2a. Implement measures to reduce vehicular travel.**

The following additional measures should be implemented:

- Plan for future transit stops within the project.
- Commercial centers, schools and recreational facilities within the site should have adequate and secure bicycle parking areas.



- Provide nearby park-and-ride facilities. Two such facilities are proposed (although they are not part of the project): one in the vicinity of Sunol Boulevard and the I-680 interchange, and one near the intersection of Valley Avenue and Bernal Avenue.
- When proposed park-and-ride lots are available, provide convenient and safe pedestrian access to them.
- Encourage BART to extend shuttle service to the site and/or proposed nearby park-and-ride facilities.

**Measure K2b. Implement measures to reduce emissions related to residential land uses.**

The following measures should be implemented:

- Restrict the number of fireplaces in residences to one per household and/or require residential use of EPA-certified wood stoves, pellet stoves or fireplace inserts. EPA-certified fireplaces and fireplace inserts are 70 to 90 percent effective in reducing emissions from this source. Also encourage the use of natural gas fired fireplaces.
- Require outdoor outlets at residences to allow use of electrical lawn and landscape maintenance equipment.
- Make natural gas available in residential backyards to allow use of natural gas-fired barbecues.

While mitigation measures that are part of the proposed project in combination with those recommended by this report would be able to reduce project impacts on regional air quality by 5 to 10 percent, there is currently no practical way to reduce impacts by 80 percent to bring project impacts below the BAAQMD significance thresholds. Therefore, the project's impacts on regional air quality are considered a significant and unavoidable adverse impact.

#### 4. Summary Comparison of Impacts and Mitigated Impacts: Air Quality

	Cooperative Plan	Preferred Plan (Alternative 1)
<b>Impact K1.</b> Construction activities would generate dust and PM-10, creating the potential for nuisance.	S/S (temporary, during mass site grading); S/LS for subsequent site-specific grading	S/S (temporary, during mass site grading); S/LS for subsequent site-specific grading
<b>Impact K2.</b> The project would contribute to regional emissions well in excess of the thresholds of significance recommended by the Bay Area Air Quality Management District.	S/S	S/S

Key: \*/\*: significance before mitigation/significance after mitigation.  
 S: significant (C): contributes to cumulative impact  
 LS: less than significant n.a.: impact does not apply to this alternative  
 \*: no mitigation required ND: not determinable  
 †: Less than significant before mitigation, but contributes to cumulatively significant impact.  
 NM: no mitigation possible (beyond policies, programs, and other regulations already in place).



## L. NOISE

This section evaluates the environmental noise impacts associated with the implementation of the proposed project and its alternatives. Previous noise assessments for similar projects on the site have indicated that the major potential noise impact associated with this project is the compatibility of the development with the onsite noise environment. The emphasis of this noise section is on evaluating the compatibility of the proposed uses with the onsite noise environment, examining the feasibility of implementing mitigation measures to improve the compatibility, and evaluating their effectiveness. Other potential noise impacts, including the potential for increased traffic noise levels on the streets serving the site and the impact of noise generated during construction on adjacent land uses, are also discussed. The noise section relies heavily on work conducted previously, most specifically, the recirculated County DEIR on the specific plan for this site.

To assist the reader in understanding this section, Appendix E includes a discussion of the terminology and fundamental concepts of environmental noise analysis.

### 1. Characteristics of the Project

The project and alternatives all include built-in noise mitigation features as well as noise-sensitive uses. The noise mitigation features are discussed for each plan below. The noise-sensitive uses include housing, an elementary school, outdoor recreation, and civic (or potential civic) uses. The locations of these uses vary among the plans.

#### a. Cooperative Plan

Noise mitigation features built into the Cooperative Plan include:

(1) West Parcel. Noise mitigation would be built into the project along the west side of I-680 and the south side of Bernal Avenue.

*(a) I-680.* A combination landscaped berm/soundwall would extend from the I-680 onramp on the north to the vicinity of the railroad overcrossing on the south. This berm/wall would be located near the freeway, just inside the property line of the SFWD lands. The height of the combined berm/wall is expected to be 16 feet. The berm would undulate vertically, to provide visual interest as seen from the freeway. In places where the elevation of the berm is lower than 16 feet or the berm is interrupted, a soundwall, possibly of transparent material, would fill in to the design height.

The Cooperative Plan places elements of the golf course between I-680 and most of the residential areas on the West Parcel, thereby providing additional mitigation of the freeway noise by virtue of the distance from the noise source.

*(b) Bernal Avenue/I-680 Interchange.* A soundwall would be located along the south side of the street west of the I-680 interchange, extending west approximately halfway to the western edge of the project site and south/east around the Bernal/I-680 interchange. The soundwall would be 16 feet high.

(2) Central Parcel. The golf course would provide some noise attenuation for the residential areas by virtue of its location between those areas and I-680. Additional noise mitigation would be built into the project along the east side of I-680, the south side of Bernal Avenue, and the UPRR railroad right-of-way.

(a) *I-680*. The Cooperative Plan places elements of the golf course between I-680 and most of the residential areas on the Central Parcel, thereby providing a built-in separation for those areas from the freeway noise. To provide additional noise attenuation, a landscaped 16-foot berm would be located parallel to I-680 from approximately the southern end of the Village Commercial area on the north to the local road in the south (to where that road passes under the freeway). Both golf hole #1 and the driving range would be oriented with their long dimension parallel to the freeway, and the berm would meander between the driving range and golf hole.

Attenuation of freeway-related noise in the residential portion of the Village area would be achieved as commercial/office structures are built between I-680 and Valley Avenue.

(b) *Bernal Avenue*. Commercial/office development along the south side of Bernal Avenue would shield the residential uses in the interior portions of the site from noise generated by traffic along Bernal and by events at the Alameda County Fairgrounds.

If the City should exercise its option to acquire up to 17 acres of the site for civic use, that use would be located along the south side of Bernal Avenue, in the area shown as commercial/office east of the Village Commercial area in the Cooperative Plan map (Figure 4, p. 31). The plan does not provide a noise barrier between this area and Bernal Avenue on the north or the residential uses on the south.

(c) *UPRR railroad corridor*. A 16-foot soundwall would be located adjacent to sensitive land uses west of the UPRR railroad right-of-way. The wall would extend from the northernmost residential area (where the loop road curves to parallel the railroad tracks) south to the I-680 freeway undercrossing.

(3) East Parcel. Noise protection is provided along the UPRR railroad corridor.

(a) *UPRR railroad corridor*. A 16-foot soundwall would be located along the entire western edge of the East Parcel, along the railroad right-of-way.

(b) *Other locations*. The portion of the knoll that remains after grading is completed will provide some protection from freeway noise. No noise mitigation is built into the project along the east side of the East Parcel. There is a grade differential between the East Parcel and the former SP tracks, however; the railroad alignment lies about 20 feet higher than the willow grove. East of the transportation corridor, the elevation is also lower than the railroad alignment. This grade differential affords some noise mitigation on the East Parcel.

## **b. Preferred Plan**

Like the Cooperative Plan, the Preferred Plan includes a number of features intended to mitigate noise.

(1) West Parcel. Noise mitigation features are similar to those in the Cooperative Plan:

(a) *I-680*. The noise barrier along the freeway right-of-way would be the same as in the Cooperative Plan.

(b) *Bernal Avenue/I-680 Interchange*. The soundwall would be the same as in the Cooperative Plan.



**(2) Central Parcel.** Noise mitigation features are similar to those in the Cooperative Plan:

(a) *I-680.* Same as in the Cooperative Plan; although the layout of the golf course is slightly different, the distance it provides between the freeway and the nearest residential use and the location of the sound berm are equivalent to the Cooperative Plan arrangement.

(b) *Bernal Avenue.* Same as the Cooperative Plan. The Preferred Plan places a portion of the golf course along the south side of Bernal Avenue east of the Village Commercial area, in the location where the Cooperative Plan has commercial/office uses with an option for civic use. As in the Cooperative Plan, the Preferred Plan does not provide a noise barrier between this area and Bernal Avenue on the north or the residential uses on the south.

(c) *UPRR railroad corridor.* Noise mitigation along the UPRR railroad corridor would be the same as in the Cooperative Plan.

**(3) East Parcel.**

(a) *UPRR railroad corridor.* Noise mitigation along the UPRR railroad corridor would be the same as in the Cooperative Plan. In places where the soundwall is interrupted, including at any intersecting streets, the wall would turn west along the boundary of the protected land use about 100 feet to provide a noise barrier in that location.

(b) *Other locations.* The knoll would not be graded, and may provide some noise protection from freeway noise for residential development and the elementary school. Similar to the Cooperative Plan, no noise mitigation is built into the project along the east side of the East Parcel.

**c. Alternative 2**

Noise mitigation features incorporated into the Alternative 2 site plan include:

**(1) West Parcel.**

(a) *I-680.* The noise barrier along the freeway right-of-way would be a landscaped berm only (not a berm/wall combination as in the Cooperative Plan and Preferred Plan).

(b) *Bernal Avenue.* No noise barrier is needed along Bernal Avenue, because commercial uses (rather than residential) are located along the street frontage.

**(2) Central Parcel.** Noise mitigation differs from the Cooperative Plan and the Preferred Plan:

(a) *I-680.* The landscaped berm parallel to I-680 is located adjacent to the freeway. As in the Cooperative Plan and the Preferred Plan, it runs from the southern end of the Village Commercial area on the north to the local road on the south.

The commercial/office development in the northwest corner of the Central Parcel provides some protection from freeway noise for the portion of the community park located along Bernal Avenue west of the Village area.

(b) *Bernal Avenue.* Commercial/office buildings provide noise attenuation for traffic on Bernal Avenue for most of the residential uses in the northern portion of the Central Parcel. There is no noise protection, however, for the two residential parcels – one on each side of the Village Commercial area – that abut Bernal Avenue.

(c) *UPRR railroad corridor.* Noise mitigation features would be the same as in the Cooperative Plan and Preferred Plan.

**(3) East Parcel.**

(a) *UPRR railroad corridor.* Noise mitigation along the UPRR railroad corridor would be the same as in the Cooperative Plan and the Preferred Plan.

(b) *Other locations.* Same conditions as in the Preferred Plan would prevail.

**d. Alternative 3**

The noise mitigation characteristics and locations of sensitive receptors in this alternative are described in the County EIR, Chapter 4.15.

**2. Effectiveness of Alternative Noise Mitigation Strategies**

Noise travels along the line of sight. Therefore, strategies to mitigate noise levels require placement of barriers along the sight line to interrupt the noise between the source and the receptor.

On the project site, the greatest source of existing and expected future noise is traffic on the I-680 freeway. Because the freeway is elevated as it passes through the site, barriers placed nearer the road must be taller than barriers placed farther away (i.e., closer to the houses) in order to block the sight line.

The following discussion compares the heights of noise barriers that would be required in various locations on the project site to mitigate noise to acceptable levels. “Acceptable levels” are discussed in the Setting section of this part of Chapter 5 (beginning on p. 231) and summarized in Table 46 (p. 232). This comparison focuses on the upper limit for “normally acceptable” noise outside homes and other places where relative quiet is needed (60 dB) and the upper limit for “normally acceptable” noise in outdoor recreation areas (65 dB). It also compares the effectiveness of barriers that are composed of varying materials (landscaped berms vs. walls vs. combination berm/walls).

**a. West Parcel, North of the I-680 Overcrossing of Pleasanton Avenue Extension**

**(1) Continuous Berm Adjacent to I-680.** A landscaped berm located adjacent to the right-of-way would have to be 30+ feet tall to achieve 60  $L_{dn}$  across the entire site. An 18-foot tall berm would reduce noise levels to a  $L_{dn}$  of 65 dB across the site. A berm 16 feet tall – the maximum height allowed by Caltrans in the right-of-way – would reduce noise levels to approximately 66 dB outside the homes closest to the freeway.

**(2) Combination Berm/Soundwall Adjacent to I-680.** A combination berm with a soundwall would also have to be 30+ feet to achieve 60  $L_{dn}$  across the site and 21 feet tall to achieve 65 dB across the site. A combination berm/soundwall 16 feet tall (the maximum height allowed by Caltrans in the right-of-



way) would reduce noise levels to approximately 67 dB outside the homes closest to the freeway and 66 dB outside homes within 500 feet of the centerline of the freeway.

**(3) Continuous Berm Adjacent to Homes Closest to the Freeway.** If a continuous berm were located adjacent to the homes proposed closest to the freeway, the berm would have to be 11 feet high to achieve 60  $L_{dn}$ . The berm would be most effective at reducing noise levels for the first row of homes behind the berm, but the combination of the effect of the berm and the intervening rows of houses and distance from the freeway would also reduce noise levels in other backyards to less than 60 dB. A berm height of 7 feet would be required to reduce the  $L_{dn}$  to 65 dB.

**(4) Combination Berm/Soundwall Adjacent to Homes Closest to the Freeway.** A berm with a soundwall on top of it located adjacent to the homes closest to the freeway would have to be taller than a continuous berm. A 14-foot high wall would reduce the outdoor sound level to 60 dB and a 10-foot high wall would reduce the outdoor sound level to 65 dB.

**b. West Parcel, South of the I-680 Overcrossing of Pleasanton Avenue Extension**

Noise levels in this portion of the West Parcel are lower than in the northern portion of the parcel, because the freeway disappears into the cut through the knoll at the south end of the property. Noise levels at an equivalent distance from the freeway at the south end of the parcel are three to five decibels lower than they are at the north end. The very southern end of the parcel would be exposed to a  $L_{dn}$  of about 65 dB for the closest homes with no noise mitigation features in place. Short of constructing a soundwall at the edge of the freeway shoulder, it will not be possible to further mitigate noise levels in this area.

**c. Central Parcel, South of the Village Center**

**(1) Soundwall Adjacent to I-680.** A continuous soundwall located at the freeway right-of-way line would have to be 30+ feet tall to reduce noise levels across the entire site to below 60 dB. The wall would have to be 21 feet tall to reduce the noise level to 65 dB across the site.

**(2) Berm Adjacent to I-680.** A landscaped berm located at the freeway right-of-way line would have to be 30+ feet tall to reduce noise levels across the entire site to below 60 dB, and 18 feet tall to reduce the noise level to 65 dB across the site.

**(3) Continuous Berm or Soundwall in the Golf Course, Between I-680 and the Homes Closest to I-680.** A continuous berm in the golf course between I-680 and the homes closest to I-680 would vary in height, depending upon exactly how far it is between the homes and the freeway. In any location, however, it would have to be shorter than a wall or berm located at the freeway but taller than a berm or wall located adjacent the homes. If it were located exactly midway between the freeway and the homes, a 17-foot berm or 20-foot wall would be required to reduce the noise levels to 60 dB and a 13-foot berm or 16-foot wall would be required to reduce the noise levels to 65 dB.

**(4) Continuous Berm or Soundwall Adjacent to Homes Closest to I-680.** A continuous barrier adjacent to the homes closest to I-680 would have to be an 11-foot high berm or 14-foot high wall to reduce noise levels to 60 dB, and a 7-foot high berm or 10-foot high wall to reduce noise to 65 dB.

#### **d. Central Parcel, Bernal Avenue to South End of the Village Center**

Both the Cooperative Plan and the Preferred Plan rely on a combination of noise mitigation features to control noise in the residential area on the Central Parcel between Bernal Avenue and the south end of the Village Center. (This area is north of the northern terminus of the proposed landscaped berm.) The proposed noise mitigation features are (1) the berm or soundwall located between the freeway and residential areas south of the Village Center, (2) the attenuation that results from the distance between these homes and Bernal Avenue, (3) the fact that buildings interposed between Bernal Avenue and the homes would significantly reduce noise levels, and (4) orientation of the multi-family homes so that outdoor use areas are protected by the front of the buildings from noise emanating from Valley Avenue.

Noise levels will be reduced by 5 to 10 decibels by the shielding provided by the buildings. The arrangement proposed for the multi-family homes will eliminate the need for a soundwall along Valley Avenue and provide for quiet outdoor space for each unit. The single family homes in the westerly portion of this residential area, however, will still be exposed to noise levels in excess of 60 dB, even with this combination of mitigation features; prior to buildout of the commercial/office buildings, noise levels could exceed 65 dB in this area.

#### **e. East Parcel**

**(1) Soundwall Adjacent to UPRR Tracks.** The 16-foot high wall proposed with the project along the tracks would reduce train noise levels along the corridor to 60 dB. A shorter wall – on the order of eight feet high – would reduce noise levels to between 65 and 68 dB, which would be below the City's goal for outdoor noise exposure adjacent to railroad tracks. A wall of this height would be more in keeping with the character of a residential area.

**(2) Noise Levels Northeast of the Knoll.** The knoll significantly reduces noise levels in this portion of the site. Noise levels northeast of the knoll, in the area of the existing pond, are below a  $L_{dn}$  of 60 dB. Portions of the knoll overlooking the freeway, in contrast, are exposed to noise levels as high as a  $L_{dn}$  of 75 dB. Therefore, if this area is left as open space in its current condition, much of the space would be very quiet but portions of it would be quite noisy. Noise levels back in the vicinity of the proposed fire station and the school site (in the Preferred Plan) would be below a  $L_{dn}$  of 60 dB until such time as rail operations begin in the transportation corridor.

### **3. Setting**

#### **a. Existing Setting**

The major sources of noise that affect the site are traffic on I-680, traffic on Bernal Avenue, railroad operations along the Union Pacific Railroad (UPRR) tracks, activities at the Alameda County Fairgrounds, activities associated with the Pleasanton Middle School on Case Avenue, and industrial uses located to the east.

The Alameda County Transportation Corridor (“transportation corridor”), in the alignment formerly occupied by the Southern Pacific Railroad (SPRR) right-of-way, is not currently in use through the project area; there are plans, however, to use this right-of-way for an excursion train that would operate intermittently, primarily on weekends. As noted above, the difference in elevation between the East Parcel and the transportation corridor (and lands lying farther east) has some beneficial effects in insulating uses on either side of the transportation corridor from noise on the other.



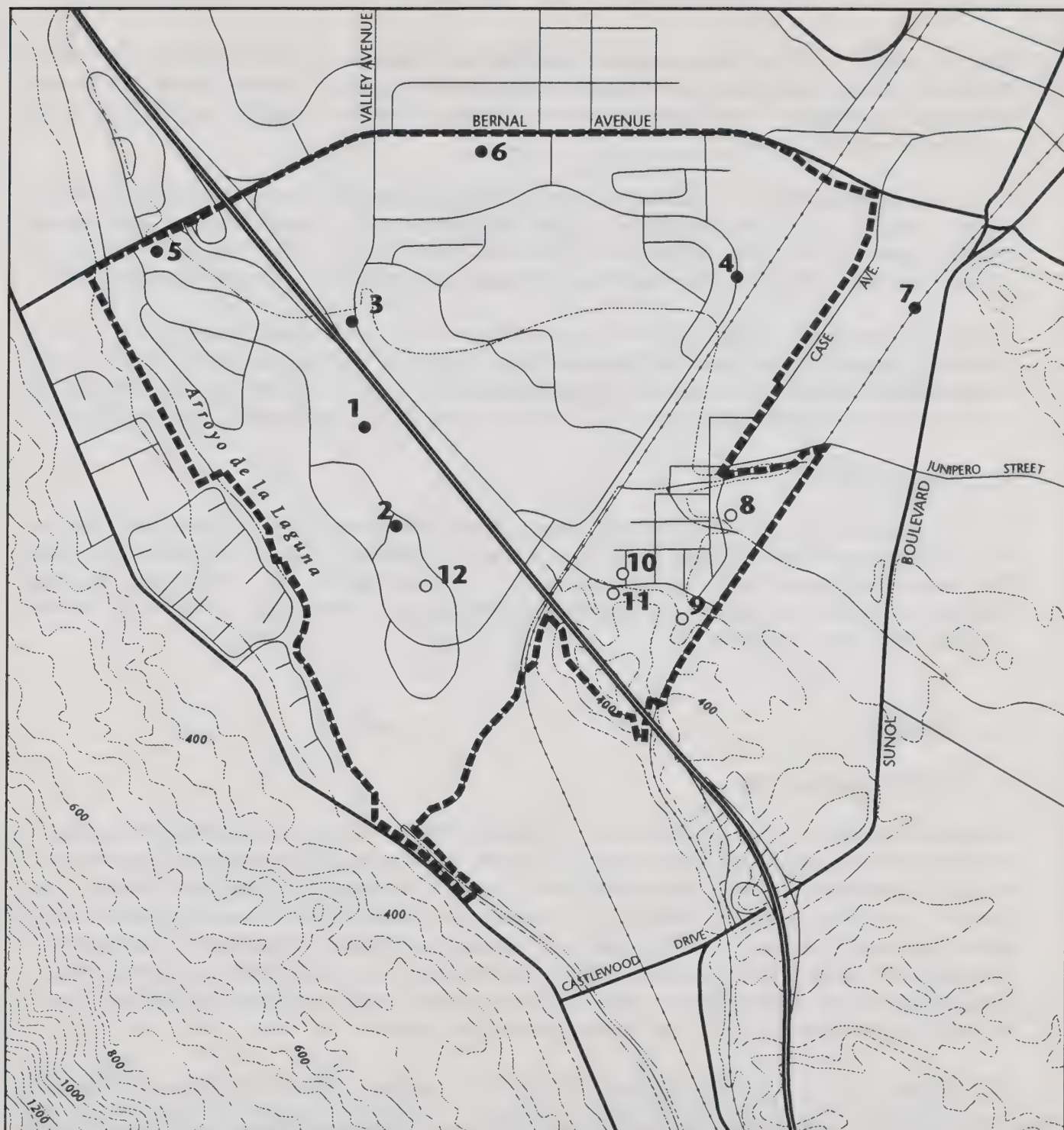
A noise measurement survey was conducted in July and August, 1995 to quantify noise exposure on the site. The findings are described in detail in the recirculated County DEIR (incorporated by reference). Figure 29 shows the locations where 24-hour noise measurements were made (Locations 1-7). Table 45 summarizes the existing long-term noise measurement results.

**Table 45**  
**Summary of Existing Noise Measurement Results**

Location	Time Period	L <sub>dn</sub> (dB)
#1 290 feet west of I-680 centerline 10 feet above ground	7:00 PM 26 July 1995 to 7:00 PM 28 July 1995	73
#2 685 feet west of I-680 centerline 9 feet above ground	7:00 PM 26 July 1995 to 7:00 PM 28 July 1995	68
#3 370 feet east of I-680 centerline 10 feet above ground	7:00 PM 26 July 1995 to 7:00 PM 28 July 1995	73
#4 140 feet west of UPRR tracks 10 feet above ground	8:00 PM 26 July 1995 to 8:00 PM 28 July 1995	62
#5 40 feet south of Bernal Avenue centerline west of I-680 8 feet above roadway	10:00 AM 31 July 1995 to 10:00 AM 3 August 1995	69
#6 50 feet south of Bernal Avenue centerline east of I-680 9 feet above roadway	10:00 AM 31 July 1995 to 10:00 AM 2 August 1995	70
#7 32 feet west of Case Avenue centerline on light pole 10 feet above roadway	10:00 AM 31 July 1995 to 10:00 AM 3 August 1995	65
#8 1,550 feet east of I-680 centerline 5 feet above ground	12:00 PM 15 April 1997 to 12:10 PM 15 April 1997	52*
#9 950 feet east of I-680 centerline 5 feet above ground	12:15 PM 15 April 1997 to 12:25 PM 15 April 1997	53*
#10 600 feet east of I-680 centerline 5 feet above ground	12:35 PM 15 April 1997 to 12:45 PM 15 April 1997	62*
#11 250 feet east of I-680 centerline 5 feet above ground	12:55 PM 15 April 1997 to 1:05 PM 15 April 1997	65*
#12 800 feet east of I-680 centerline 5 feet above ground	1:20 PM 15 April 1997 to 1:30 PM 15 April 1997	62*

\* L<sub>dn</sub> estimates, based on comparison of 10-minute noise measurements of April 15 to 24-hour variations in noise levels along I-680.

Source: Sites 1-7: Charles M. Salter Associates, August 1995; sites 8-12: Illingworth & Rodkin, April 1997



● Noise Measurements by Charles M. Salter Associates, August 1995

○ Noise Measurements by Illingworth & Rodkin, April 1997

0 500 1000 2000  
FEET



Figure 29  
**Noise Measurement Locations**



The 1995 noise survey did not focus on areas behind the knoll at the southern end of the property on either side of the freeway. Noise measurements were conducted on the afternoon of April 15, 1997 to quantify noise levels at the southern end of the site. Noise measurements were conducted at Locations 8 through 12 on Figure 29 and the results are included in Table 45.

The site's existing noise exposure is shown on Figure 30. As can be seen from the figure, the vast majority of the site is exposed to a day/night noise level ( $L_{dn}$ ) of greater than 60 dB. Noise levels are highest adjacent to I-680 where the  $L_{dn}$  in the vicinity of the right-of-way line reaches 75 dB. (Figure 30 excludes the impact of activity on the SPRR line, which would be limited to an excursion train on some weekend days.)

The noise exposure in the vicinity of I-680 is an interesting case. I-680 is elevated above the site. Close to the freeway, noise levels are lower than they would be if the freeway were not elevated. Farther from the freeway, noise levels are slightly higher than they would be if the freeway were not elevated. The fact that the freeway is elevated also significantly affects the recommended type of mitigation, as discussed below.

## **b. Future Setting**

In order to evaluate the compatibility of the proposed project with the onsite noise environment, it is necessary to project noise levels to a point in the future when traffic activity will reach its projected maximum. The recirculated County DEIR includes a discussion of the development of the future noise exposure contours for the site. In general, noise contours would be similar to those shown in Figure 30, but they would be closer to the roadways.

# **4. Impacts**

## **a. Significance Criteria**

Substantial increases in the ambient noise level or conflicts with existing goals and policies of the jurisdiction are considered significant effects under CEQA. For the purpose of this assessment, introduction of projects or activities including traffic which would increase the day/night average noise level by three decibels or more are considered significant.<sup>63</sup> Similarly, the exposure of new or existing homes to noise levels that would be considered incompatible with residential development ("conditionally acceptable" or "unacceptable") would also be considered a significant impact. Criteria of the Pleasanton General Plan for normally acceptable, conditionally acceptable, and unacceptable conditions are described below, followed by a brief discussion of the criteria established by other jurisdictions.

**(1) Pleasanton General Plan Criteria.** General Plan goals, policies and programs related to noise and applicable to the project are included in Chapter 6. The Noise Element includes a discussion (referenced in Program 1.1) expanding on the implementation of the Noise and Land Use Compatibility Guidelines (Table 46). The objective of the Noise and Land Use Compatibility Guidelines is to provide an acceptable community noise environment and to minimize noise-related complaints from residents. The compatibility guidelines should be used in conjunction with the future noise exposure levels on the site to identify projects or activities which may require special treatment to minimize noise exposure. For example, homes should not be allowed near a freeway unless mitigation measures can effectively reduce noise exposure to acceptable levels.

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<sup>63</sup> This criterion conforms to the discussion in the General Plan, pp. VIII-3 and VIII-4.

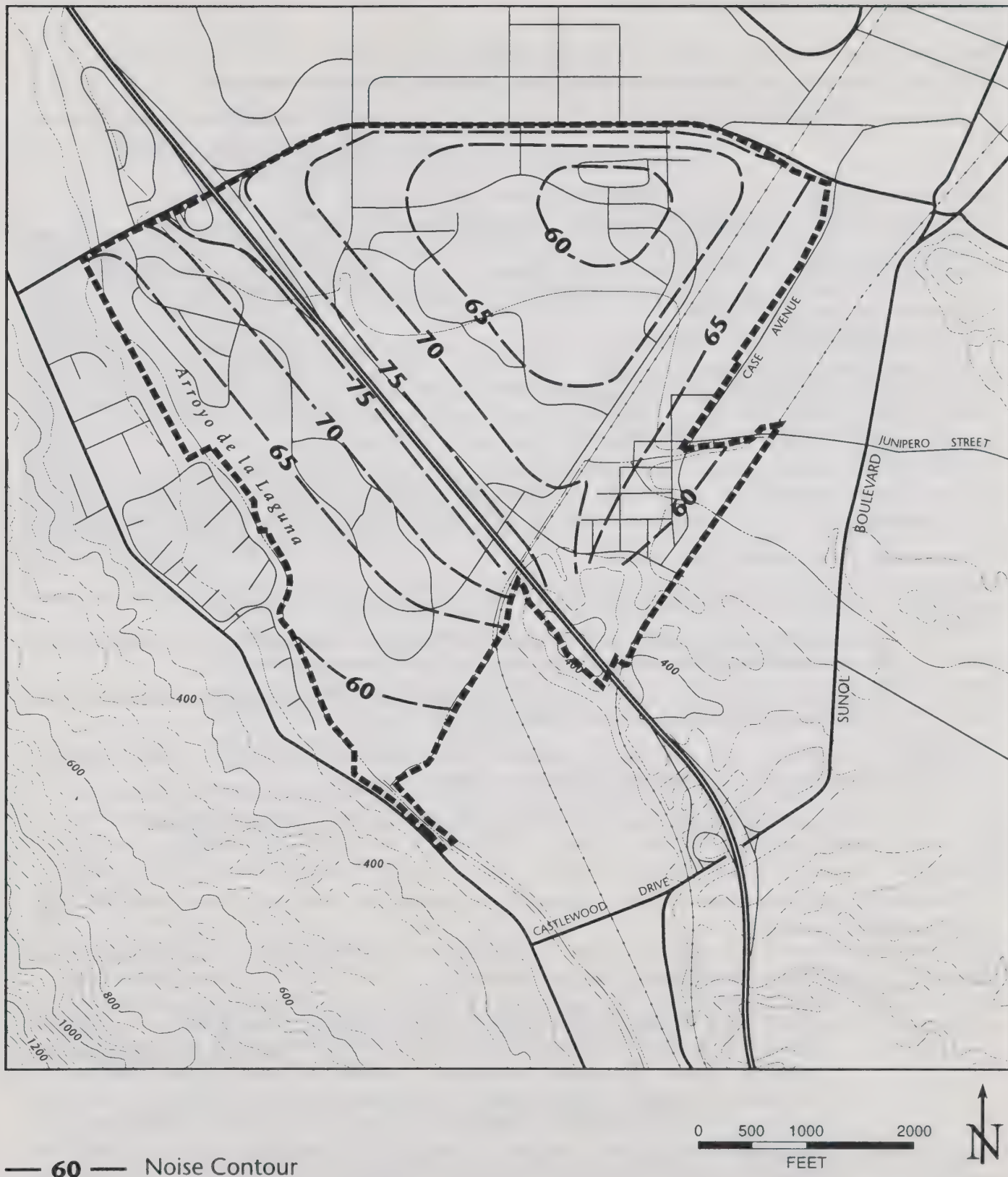


Figure 30  
Site's Existing Noise Exposure

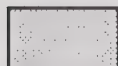


**Table 46**  
**Land Use Compatibility for Community Noise Environment**

LAND USE CATEGORY	EXTERIOR NOISE EXPOSURE L <sub>dn</sub> OR CNEL, dB					
	55	60	65	70	75	80
Residential, Hotels, and Motels						
Outdoor Sports and Recreation, Neighborhood Parks, and Playgrounds						
Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, and Churches						
Office Buildings, Business Commercial, and Professional						
Auditoriums, Concert Halls, and Amphitheaters						
Industrial, Manufacturing, Utilities, and Agriculture						



**Normally acceptable:** Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal convention construction, without any special insulation requirements.



**Conditionally acceptable:** Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.



**Unacceptable:** New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.

Source: City of Pleasanton General Plan, 1996; Illingworth & Rodkin, Inc., Acoustical Engineers

The following considerations should be taken into account when using the Noise and Land Use Compatibility Guidelines:

- **Noise Levels in Residential Areas**

- The goal for maximum noise levels in residential areas is a L<sub>dn</sub> of 60 dB. This level is a requirement to guide the design and location of future development and a goal for the reduction of noise in existing development. However, 60 L<sub>dn</sub> is a goal which cannot necessarily be reached in all residential areas within the realm of economic or aesthetic feasibility. This goal should be applied where outdoor use is a major consideration (e.g., backyards in single-family housing developments and recreation areas in multi-family housing projects). Front yards can generally tolerate a L<sub>dn</sub> of up to 65 dB. If the front yard noise level is higher than this, then interior noise levels become a concern. The outdoor standard should not normally be applied to the small decks associated with apartments and condominiums due to the lack of use of these decks even in quiet areas.

- The indoor noise level, as required by the State of California Noise Insulation Standards, must not exceed a  $L_{dn}$  of 45 dB in multi-family dwellings. This interior criterion should also be the maximum acceptable indoor noise level in single-family homes.
- **Noise Levels in Commercial, Industrial, and Office Buildings**

Appropriate interior noise levels in commercial, industrial, and office buildings are a function of the use of space. For example, the noise level in private offices should generally be quieter than for data processing rooms. Interior noise levels in offices generally should be maintained at 45 Leq or less. Acoustical designs to achieve this level should be demonstrated by the project sponsor in sufficient detail to satisfy City staff and OSHA requirements.
- **Noise Related to Railroads**
  - If the noise source is a railroad, then the outdoor noise exposure criterion should be 70  $L_{dn}$  for future development. It may not be feasible to reduce noise to 70  $L_{dn}$  in existing residential areas adjacent to railroads, because train noise is usually characterized by relatively few loud events which generally do not cause problems in an outdoor environment. Even though the outdoor  $L_{dn}$  may be high, during the majority of the time the noise level will be acceptable for speech communication and people would not be highly annoyed.
  - Interior noise levels in both single-family and multiple-family residential units exposed to railroad noise should be limited to a maximum instantaneous noise level in the bedrooms of 50 dBA. Maximum instantaneous noise levels in other rooms should not exceed 55 dBA. The requirement to reduce railroad noise indoors should be implemented if there are more than four train passbys between 7:00 AM and 10:00 PM or any trains between 10:00 PM and 7:00 AM. This minimal amount of train operation is sufficient to generate outdoor noise levels of at least 70  $L_{dn}$ .

The impact of a proposed project on an existing land use should be evaluated in terms of the potential for adverse community response, based on a significant increase in existing noise levels, regardless of the compatibility guidelines. In other words, a significant increase in noise levels would comprise an adverse impact even if the “after-condition” noise level is lower than the upper limit of the relevant compatibility guideline.

**(2) Other Criteria.** Other agencies have adopted similar noise and land use compatibility criteria. The State of California and Alameda County have recommended that single-family and multi-family residential development be considered normally acceptable up to 60  $L_{dn}$  and conditionally acceptable up to a  $L_{dn}$  of 70 dB. Other communities have adopted an outdoor noise exposure level of 65 dB as normally acceptable for residential development.

#### **b. Impacts of the Cooperative Plan and the Preferred Plan**

**(1) Onsite Noise Levels.** Development allowed by the Cooperative Plan would introduce new residential, commercial, office, outdoor recreation, and educational uses into areas affected by noise, and traffic associated with the permitted development could increase existing noise levels by a significant amount.



(a) **Residential Areas.** Noise conditions would differ in the various residential areas of the site, depending primarily on their proximity and relationship to I-680.

*Residential Uses on the West Parcel, North of the I-680 Overcrossing of Pleasanton Avenue Extension.* On the West Parcel, all proposed residential development would be exposed to a  $L_{dn}$  greater than 60 dB if no mitigation measures were included with the project. The highest noise exposure would reach 75 dB outside the homes closest to the freeway.

Under the Cooperative Plan/Preferred Plan, a 16-foot combination berm/soundwall is proposed adjacent to the Caltrans right-of-way line. With this noise mitigation feature, the homes closest to the freeway would be exposed to a  $L_{dn}$  of about 67 dB. (The berm/wall would have to be 21 feet high to reduce noise in all locations to 65 dB or less.) Homes farther back would receive the additional benefit of shielding provided by intervening homes between them and the soundwall. Under the guidelines of the Noise Element of the City of Pleasanton's General Plan, the noise environment would be considered only conditionally acceptable, rather than normally acceptable, even after the mitigation measures are constructed. Therefore, site-specific noise attenuation features would be required in the design of the homes closest to the freeway.

**Impact L1a(1).** Proposed residential development on the West Parcel north of the I-680 overcrossing of the Pleasanton Avenue extension would be exposed to a  $L_{dn}$  of greater than 60 dB.

**Impact L1a(2).** Some proposed residential development on the West Parcel north of the I-680 overcrossing of the Pleasanton Avenue extension would be exposed to a  $L_{dn}$  of greater than 65 dB.

Generally, homes exposed to noises above 65 dB would be only the first row of homes closest to the freeway, where the  $L_{dn}$  would reach as high as 67 dB but would generally be between 60 and 65 dB. These areas closest to the freeway would therefore be exposed to noise levels that would be considered only conditionally acceptable, but not normally acceptable, for outdoor noise exposure, even with the mitigation in the plan.

As noted in the criteria section under the Noise Element of the City's General Plan, if it is not deemed reasonable or feasible to mitigate noise levels to 60 dB – for example, because the required soundwall heights would be excessive – the City has the option of increasing the allowable outdoor noise level to 65 dB. If the City chooses this criterion of significance, then the mitigation features included in the Cooperative Plan/Preferred Plan would achieve an acceptable exterior noise level in most residential sections of this parcel. There would be some areas, however – for example, the single-family residential area closest to I-680 near the Bernal Avenue interchange – where noise levels would exceed even this standard by a couple of decibels, but the vast majority of the site would be exposed to a  $L_{dn}$  less than 65 dB.

*Residential Uses on the West Parcel, South of the I-680 Overcrossing of Pleasanton Avenue Extension.* At the southern end of the West Parcel, the freeway would rise above the soundwall as it passes over the railroad tracks. According to the noise measurements, the  $L_{dn}$  at the proposed homes in this area would be exposed to noise levels generally greater than 60 dB but less than 65 dB; in the locations farthest from the freeway, noise levels could be less than 60 dB.

Neither the Cooperative Plan nor the Preferred Plan proposes any noise mitigation features in this area; such measures are considered infeasible along the freeway right-of-way given the relative elevations of the freeway and the development site. Therefore, most residential development at this end of the site would be exposed to a  $L_{dn}$  exceeding 60 dB.

**Impact L1b.** Proposed residential development on the West Parcel south of the I-680 overcrossing of the Pleasanton Avenue extension would be exposed to a  $L_{dn}$  of greater than 60 dB.

*Residential Uses on the Central Parcel, South of the Village Center.* Without mitigation, noise levels on the Central Parcel would exceed a  $L_{dn}$  of 60 dB, except for a small part of the residential area farthest from Interstate 680. Noise levels would reach a  $L_{dn}$  of 75 dB at the homes closest to the freeway.

Under the Cooperative Plan/Preferred Plan with a meandering berm midway between the freeway and the closest residential area, the  $L_{dn}$  would be reduced. The proposed berm is 16 feet high. A 17-foot high berm would be required to reduce the  $L_{dn}$  to 60 dB outside of the homes behind the berm. A berm of only 13-foot height would reduce the  $L_{dn}$  to 65 dB. The berm would have to be extended northerly, beyond the limit currently proposed in the two plans, in order to shield the backyards of the closest homes in the central residential area from the freeway noise. As currently proposed, the berm does not extend far enough to the north nor wrap around to the east to shield the northernmost homes on the Central Parcel.

**Impact L1c(1).** Proposed residential development on the Central Parcel south of the Village Center would be exposed to a  $L_{dn}$  of greater than 60 dB.

The proposed berm would have to be extended northerly and increased in height to achieve a  $L_{dn}$  of 60 dB.

**Impact L1c(2).** Some proposed residential development on the Central Parcel south of the Village Center would be exposed to a  $L_{dn}$  of greater than 65 dB.

The height of the noise mitigation feature (e.g., soundwall or berm) proposed in the two plans could be reduced to 13 feet, but the mitigation feature would have to be extended northerly to reduce exterior noise to a level of 65 dB in the most northerly residential area.

*Residential Uses on the Central Parcel, Bernal Avenue to South End of the Village Center.* Residential uses on the Central Parcel from Bernal Avenue to the south end of the Village Center would be exposed to a  $L_{dn}$  of up to 70 dB with no mitigation. The Cooperative Plan and Preferred Plan rely on a combination of measures – (1) the berm or soundwall located between the freeway and residential areas south of the Village Center, (2) the attenuation that results from the distance between these homes and Bernal Avenue, (3) the fact that buildings interposed between Bernal Avenue and the homes would significantly reduce noise levels, and (4) orientation of the multi-family homes so that outdoor use areas are protected by the front of the buildings from noise emanating from Valley Avenue. –to reduce exterior noise levels in this area.

Even with these mitigation features, noise levels outside the single-family homes in the northwest portion of the residential area adjacent to the golf course would exceed a  $L_{dn}$  of 60 dB. As noted above, the proposed berm does not extend far enough to the north nor wrap around to the east, to reduce noise levels outside the



single-family homes in the northwest portion of the residential area adjacent to the golf course to a  $L_{dn}$  of less than 60 dB. These homes are accessed from Valley Avenue just south of the proposed Village Center. The berm would have to be extended around to the intersection of Valley Avenue with the intersecting east-west cross street to provide an adequate noise screen for the backyards of the single-family homes in the area.

The multi-family portion of the development would be exposed to noise levels which would be consistent with the guidelines of the Noise Element of the City of Pleasanton General Plan, because it would be oriented with its usable outdoor areas away from Bernal Avenue and I-680.

**Impact L1d.** Proposed single-family residential development on the Central Parcel between Bernal Avenue and the south end of the Village Center would be exposed to a  $L_{dn}$  of greater than 60 dB.

The proposed berm would have to be extended northerly and increased in height to achieve the desired noise mitigation.

*Residential Uses on the East Parcel Northeast of the Knoll.* The existing knoll provides a significant amount of shielding for the majority of this parcel. Without mitigation, freeway noise levels on the Eastern Parcel would range from 52 to 75 dB. Even under the no mitigation condition, the area designated for residential development on this parcel would generally have an exterior noise level below a  $L_{dn}$  of 65 dB and only the closest portion of the development to the freeway would approach a  $L_{dn}$  of 65 dB.

With the mitigation measures proposed in the Cooperative Plan/Preferred Plan, the  $L_{dn}$  in this area related to freeway traffic noise would be below 60 dB outside of all the homes.

*Residential Uses on the East Parcel Adjacent to UPRR Tracks.* Noise exposure on the East Parcel would be dominated by railroad noise from the United Pacific Railway and possibly, in the future, from the occasional use of the transportation corridor for excursion trains. The noise level from the railroads would be reduced adequately by the proposed soundwalls and building treatments.

**(b) Commercial/Office Areas.** The commercial office area located in the southeast quadrant of the Bernal Avenue I-680 interchange would be exposed to a  $L_{dn}$  of 70 to 75 dB, which would be considered "conditionally acceptable" for office development. The Village commercial area and the commercial office area along Bernal Avenue would be exposed to a  $L_{dn}$  ranging from 60 to 70 dB and would be considered "normally acceptable" without requirements for noise mitigation.

Neither the Cooperative Plan nor the Preferred Plan proposes mitigations for the commercial/office areas.

**Impact L2.** Proposed commercial/office land uses within the project area would be exposed to exterior noise levels in excess of a  $L_{dn}$  of 70 dB.

**(c) Outdoor Recreation Areas.** The golf course (on both the Central Parcel and the West Parcel) would be exposed to a  $L_{dn}$  as high as 75 dB near the freeway; areas farthest from the freeway would have noise levels lower than 65 dB  $L_{dn}$ . According to the policies of the City of Pleasanton's General Plan, the portion of the golf course between the 65  $L_{dn}$  contour and the freeway on both sides of I-680 would be

considered “conditionally acceptable.” The parts of the golf course easterly of the 65  $L_{dn}$  contour on the Central Parcel and westerly of the 65  $L_{dn}$  contour on the West Parcel – would be “normally acceptable.”

The proposed parks and open space areas would be exposed to a  $L_{dn}$  ranging from 60 to 70 dB. The majority of the park areas on all parcels would be considered “normally acceptable” for park uses. The portions of the Community Park (on the Central Parcel) and the neighborhood park on the West Parcel adjacent to Bernal Avenue would be considered “conditionally acceptable” (where noise levels exceed 65 dB). The open space on the knoll, at the southern end of the East Parcel, would be exposed to a  $L_{dn}$  ranging from 55 to 70 dB. Most of this site would be “normally acceptable,” but the portion on top of the knoll overlooking the freeway would be “conditionally acceptable.”

Noise exposure in portions of the golf course and the proposed park could not be reduced to “normally acceptable” levels per the Noise Element of the City of Pleasanton’s General Plan. Although the  $L_{dn}$  would be higher than recommended, the hourly noise levels during the times these areas would be used would not be excessive. The average hourly noise level along I-680 is typically two to five decibels lower than the  $L_{dn}$ . While not ideal, the daytime noise environment would not be inappropriate for active outdoor use areas.

**Impact L3a.** Some portions of the proposed golf course would be exposed to noise levels in excess of a  $L_{dn}$  of 65 dB.

**Impact L3b.** Portions of the proposed community park (on the Central Parcel) adjacent to Bernal Avenue would be exposed to noise levels in excess of a  $L_{dn}$  of 65 dB.

**Impact L3c.** Portions of the proposed neighborhood park on the West Parcel adjacent to Bernal Avenue would be exposed to noise levels in excess of a  $L_{dn}$  of 65 dB.

**Impact L3d.** The neighborhood park and open space area on the East Parcel would be exposed to noise levels in excess of a  $L_{dn}$  of 65 dB.

**(d) School.** The school sites in both the Cooperative Plan and the Preferred Plan are located “behind” the knoll in relation to I-680, and the knoll shields the site from freeway traffic noise; in the Preferred Plan, the site is farther from the freeway. Assuming that the knoll retains its current height (even though portions of it would be graded in the Cooperative Plan), the  $L_{dn}$  in the vicinity of the school site would be about 55 dB. This would be considered “normally acceptable” and no mitigation would be required.

**(2) Offsite Noise Levels.** Traffic noise impacts would be about the same under both the Cooperative Plan and the Preferred Plan. The comparison between noise levels with project-generated traffic plus all other approved projects and noise associated with the existing 1995 traffic volumes contained in the EIR for the General Plan indicate that noise level increases would be greatest along Bernal Avenue between the project entrance west of I-680 and the project entrances east of I-680. Noise level increases in this area would be three to four decibels.



There is an existing residential development on the north side of Bernal Avenue just west of I-680. A soundwall has been constructed to shield homes in that development from traffic noise from Bernal Avenue. The noise studies conducted to determine the height and length of this soundwall were based on General Plan buildout traffic projections. A comparison of the existing with the approved plus project traffic volumes for either the Preferred or Cooperative Plan indicate that these volumes are lower than the volumes projected for General Plan buildout. Therefore, noise levels would continue to be adequately mitigated.

There are no noise-sensitive land uses along Bernal Avenue in the areas where increases of three decibels or more would occur on the east side of I-680. Therefore, these noise increases will not have adverse effects on any existing noise sensitive receptors.

Noise associated with the industrial uses east of the site, along Sunol Boulevard, would not be great enough to have adverse effects on the residential uses proposed for the East Parcel. According to the recirculated County DEIR, noise associated with these uses “is identifiable because of its intermittent and sometimes tonal nature”; in addition, “some of the industrial uses have nighttime operations including shipping and receiving using refrigeration trucks.” The County DEIR concludes that this noise level is not consistent enough to be measured as  $L_{dn}$ . Because the noise is intermittent and is located at some distance from the proposed residential uses, its impact is not considered potentially significant.

Noise level increases on all the other streets in the area would be less than three decibels and would not be significant.

Mitigation Measure J2b, intended to mitigate traffic congestion on the I-680/Bernal Avenue southbound offramp, requires modification of the existing interchange. This modification could include construction of a new freeway offramp in the northwest quadrant of the I-680/Bernal Avenue interchange. The Laguna Oaks project anticipated this construction, and provided a soundwall along the ramp alignment that was anticipated at the time that project (Laguna Oaks) was built. This soundwall would be sufficient to mitigate noise associated with the new ramp to acceptable levels outside the nearest homes if the ramp is built as anticipated at that time. As noted in Chapter 5, Part J (Transportation), the intersection improvement project will be subject to environmental review, and noise impacts for the proposed configuration(s) will be reanalyzed at that time.

**(3) Onsite and Offsite Noise from Intermittent Sources.** Intermittent noise sources include activities at the Alameda County Fairgrounds, the fire station that could be located in the project area, and trains using the UP and (in the future) transportation corridor railroad tracks.

***(a) Noise from Activities at the County Fairgrounds.*** Significant noise-generating activities on the fairgrounds site (such as auto races, carnival rides, concerts in the amphitheater, and sirens from police training and practice areas) would continue to create intermittent noise impacts. Development of residential uses along Bernal Avenue would be affected by these fairgrounds activities. The commercial development that would be located between the closest residential areas and the fairgrounds in both the Cooperative Plan and the Preferred Plan increases the distance between these sensitive receptors and the fairground’s activities and provides barriers in the form of buildings to reduce, somewhat, the noise level received. Nonetheless, even with the windows closed, the closest residents could occasionally be annoyed by these activities at the fairgrounds. The annual average  $L_{dn}$  would be less than 60 dB, however, so this impact is not considered significant.

***(b) Noise from the Proposed Fire Station.*** Under both the Cooperative Plan and the Preferred Plan, the proposed fire station would be located adjacent to the residential areas and the school. The sirens

associated with fire trucks would generate noise levels of up to 100 dBA at a distance of 100 feet. Noise at this level could cause sleep disturbance in the nearest homes at night and activity interference in classrooms.

**Impact L4. Noise levels generated by the proposed fire station would be significant at noise sensitive receptors.**

(c) *Noise Environment Near Railroad Corridors.* The noise environment along the UPRR tracks would be considered “normally acceptable” for residential development per the General Plan Noise Element. The outdoor  $L_{dn}$  would not exceed 70 dB with no mitigation; instantaneous noise levels during train passbys would exceed 70 dB. The 16-foot high wall proposed in the Cooperative Plan and Preferred Plan along the tracks would reduce train noise levels along the corridor to 60 dB. (A shorter wall – on the order of eight feet high – would reduce noise levels to between 65 and 68 dB, which would be below the City's goal for outdoor noise exposure adjacent to railroad tracks.) The General Plan would require that maximum noise levels inside these homes be controlled so that they do not exceed 50 dBA in bedrooms or 55 dBA in other rooms.

Use of the transportation corridor for weekend excursion trains would not create a significant noise impact, given the intermittent and occasional nature of the noise generated by the trains.

**Impact L5. Outdoor noise levels along the UPRR tracks would exceed the threshold at which controls are required to reduce interior noise levels.**

(4) Noise Generated by Construction Activities. During construction, noise levels would be temporarily elevated outside of the homes located along Foothill Road and north of Bernal Avenue west of I-680, and homes east of Case Avenue. The highest noise levels would occur during site grading. The noise generated during construction would be audible, but generally would be masked by freeway noise. With the exception of work taking place very close to these homes, impacts would be minimal.

As construction proceeds and some of the residential development is completed, ongoing construction noise in other areas of the project site could take place quite close to these new residential developments. During these times, noise levels could interfere with outdoor conversation and even with indoor activity. This would be an unavoidable significant short-term impact.

**Impact L6. Construction activity would raise noise levels in selected residential areas to unacceptable levels.**

### c. Impacts of Alternative 2

The impacts associated with Alternative 2 would be much worse than from the Cooperative Plan or Preferred Plan. Residential areas are proposed much closer to I-680, because there is no golf course area located between the freeway and the homes. As a result, more homes would be exposed to higher noise levels than in the Cooperative Plan or the Preferred Plan. Noise exposure in the residential areas in the western half of the Central Parcel and the eastern portion of the West Parcel would remain in the “conditionally acceptable” range (as opposed to the “normally acceptable” range), exceeding a  $L_{dn}$  of 60 dB.



**Impact L1a(1).** Proposed residential development on the West Parcel north of the I-680 overcrossing of the Pleasanton Avenue extension would be exposed to a  $L_{dn}$  of greater than 60 dB.

Same as for the Cooperative Plan and the Preferred Plan.

**Impact L1a(2).** Some proposed residential development on the West Parcel north of the I-680 overcrossing of the Pleasanton Avenue extension would be exposed to a  $L_{dn}$  of greater than 65 dB.

Same as for the Cooperative Plan and the Preferred Plan, but more homes would be exposed to this higher noise level in the absence of golf course areas west of I-680..

**Impact L1b(1).** Proposed residential development on the West Parcel south of the I-680 overcrossing of the Pleasanton Avenue extension would be exposed to a  $L_{dn}$  of greater than 60 dB.

Same as for the Cooperative Plan and the Preferred Plan, but a greater number of homes would be exposed to this noise level.

**Impact L1b(2).** Proposed residential development on the West Parcel south of the I-680 overcrossing of the Pleasanton Avenue extension would be exposed to a  $L_{dn}$  of greater than 65 dB.

Homes would be located closer to the freeway in the absence of golf course areas west of I-680.

**Impact L1c(1).** Proposed residential development on the Central Parcel south of the Village Center would be exposed to a  $L_{dn}$  of greater than 60 dB.

**Impact L1c(2).** Some proposed residential development on the Central Parcel south of the Village Center would be exposed to a  $L_{dn}$  of greater than 65 dB.

Same as for the Cooperative Plan and the Preferred Plan, but a greater number of homes would be exposed to this noise level in the absence of golf course areas between residential areas and I-680.

**Impact L1d.** Proposed single-family residential development on the Central Parcel between Bernal Avenue and the south end of the Village Center would be exposed to a  $L_{dn}$  of greater than 60 dB.

Same as for the Cooperative Plan and the Preferred Plan.

**Impact L2.** Proposed commercial/office land uses within the project area would be exposed to exterior noise levels in excess of a  $L_{dn}$  of 70 dB.

Same as for the Cooperative Plan and the Preferred Plan.

**Impact L3a.** Some portions of the proposed golf course would be exposed to noise levels in excess of a  $L_{dn}$  of 65 dB.

Same as for the Cooperative Plan and the Preferred Plan.

**Impact L3b.** Portions of the proposed community park (on the Central Parcel) adjacent to Bernal Avenue would be exposed to noise levels in excess of a  $L_{dn}$  of 65 dB.

Same as for the Cooperative Plan and the Preferred Plan.

**Impact L3c.** Portions of the proposed neighborhood park on the West Parcel adjacent to Bernal Avenue would be exposed to noise levels in excess of a  $L_{dn}$  of 65 dB.

Same as for the Cooperative Plan and the Preferred Plan.

**Impact L3d.** The neighborhood park and open space area on the East Parcel would be exposed to noise levels in excess of a  $L_{dn}$  of 65 dB.

Same as for the Cooperative Plan and the Preferred Plan.

**Impact L4.** Noise levels generated by the proposed fire station would be significant at noise sensitive receptors.

Same as for the Cooperative Plan and the Preferred Plan.

**Impact L5.** Outdoor noise levels along railroad tracks would exceed the threshold at which controls are required to reduce interior noise levels.

Same as for the Cooperative Plan and the Preferred Plan.

**Impact L6.** Construction activity would raise noise levels in selected residential areas to unacceptable levels.

Same as for the Cooperative Plan and the Preferred Plan.

#### **d. Alternative 3**

The noise impacts associated with Alternative 3 are described in the County EIR, Chapter 4.15.

### **5. Mitigation Measures**

The Noise Element of the City of Pleasanton's General Plan requires that mitigation measures be included for new development to reduce outdoor noise exposure to acceptable levels for residential land uses, schools, and other noise sensitive receptors where outdoor use is important, including parks. In general, the



acceptable level is consistent with the upper limit of the “normally acceptable” range shown in Table 46. The Noise Element recognizes that achieving this noise level may not be feasible in all cases, and allows for higher exterior noise levels with mitigation of interior noise exposure where mitigation to achieve a  $L_{dn}$  of 60 dB is not reasonable or feasible.

**Impact L1a(1).** Proposed residential development on the West Parcel north of the I-680 overcrossing of the Pleasanton Avenue extension would be exposed to a  $L_{dn}$  of greater than 60 dB.

**Impact L1a(2).** Some proposed residential development on the West Parcel north of the I-680 overcrossing of the Pleasanton Avenue extension would be exposed to a  $L_{dn}$  of greater than 65 dB.

**Measure L1a(1).** *If the standard for a  $L_{dn}$  not in excess of 60 dB is applied: Increase the height or shift the location of the proposed berm/soundwall combinations.*

Both the Cooperative Plan and the Preferred Plan propose a 16-foot-high combination berm/wall located adjacent to the freeway right-of-way and a 16-foot soundwall adjacent to the Bernal/I-680 interchange.

To achieve exterior noise levels of 60 dB along I-680, the combination berm/wall along the freeway would have to be increased to a height of more than 30 feet. A berm/wall of this height would have noticeable visual effects, as discussed in Chapter 5, Part N (Visual Resources). A combination berm/wall adjacent to the homes closest to the freeway would have to be 14 feet high to achieve this effect. Alternatively, a landscaped berm 11 feet high adjacent to these homes would also reduce noise levels to 60 dB.

At the Bernal/I-680 interchange, the height of the soundwall would have to be increased to 30+ feet to achieve noise levels of 60 dB or less.

The visual effects of berms and soundwalls are discussed in Chapter 5, Part N (Visual Resources).

**Measure L1a(2).** *If the standard for a  $L_{dn}$  not in excess of 65 dB is applied: Increase the height or shift the location of the proposed soundwall at the I-680/Bernal Avenue interchange.*

As noted in the discussion of noise impacts, only the single-family residential area closest to I-680 near the Bernal Avenue interchange would be exposed to a  $L_{dn}$  greater than 65 dB.

To reduce noise levels in this area to less than 65 dB would require that the height of the soundwall at the interchange be increased to 21 feet.

**Measure L1a(3).** *If mitigations that would reduce exterior noise levels to comply with the adopted standard (60 dB or 65 dB) cannot feasibly be implemented: Require detailed project-specific noise studies for each development project in an area where the standard is exceeded to characterize noise conditions and to identify the noise reduction features that must be incorporated to achieve acceptable interior noise levels, and require incorporation of those features into construction.*

If the City's criterion of significance is a  $L_{dn}$  of 60 dB for residential development, then the implementation of Measure L1a(1) would reduce the impact to a less-than-significant level.

If the City's criterion of significance for outdoor noise in residential areas is 65 dB, as allowed by the General Plan in cases where meeting 60 dB is deemed to be not feasible or reasonable, then the implementation of Measure L1a(2) would reduce impacts to a less-than-significant level.

If measures required to achieve the City's criterion of significance for exterior noise in residential areas are not feasible, then implementation of Measure L1a(3) would be required but would not reduce impacts to a less-than-significant level.

**Impact L1b.** Proposed residential development on the West Parcel south of the I-680 overcrossing of the Pleasanton Avenue Extension would be exposed to a  $L_{dn}$  of greater than 60 dB.

**Measure L1b.** *If the standard for a  $L_{dn}$  not in excess of 60 dB is applied: Require detailed project-specific noise studies for each development project in an area where the standard is exceeded to characterize noise conditions and to identify the noise reduction features that must be incorporated to achieve acceptable interior noise levels, and require incorporation of those features into construction.*

Same as Measure L1a(3).

There are two possible approaches to reducing noise levels in the area south of the overcrossing: (1) construction of a soundwall or berm at the shoulder of the freeway and (2) construction of a soundwall adjacent to the homes nearest the freeway. A soundwall at the freeway shoulder would have to be more than 16 feet high to achieve sufficient noise attenuation. Walls higher than 16 feet are not allowed by Caltrans along scenic highways (I-680 is designated as a scenic highway in this location); therefore, this measure is not implementable. A soundwall adjacent to the homes nearest the freeway would not be effective because the freeway has a higher elevation than the residential area, and, consequently, the wall would not block the sound. Under these conditions, there is no feasible measure to reduce the exterior noise in this area to a level lower than 65 dB.

If the City's criterion of significance is a  $L_{dn}$  of 60 dB for residential development, then this impact on exterior noise levels is significant and not mitigatable. Implementation of Measure L1b would be required but would not mitigate impacts on exterior noise levels to a less-than-significant level.

If the City's criterion of significance for outdoor noise in residential areas is 65 dB, as allowed by the General Plan in cases where meeting 60 dB is deemed to be not feasible or reasonable, then no mitigation is required.

**Impact L1c(1).** Proposed residential development on the Central Parcel south of the Village Center would be exposed to a  $L_{dn}$  of greater than 60 dB.

**Impact L1c(2).** Some proposed residential development on the Central Parcel south of the Village Center would be exposed to a  $L_{dn}$  of greater than 65 dB.



**Measure L1c(1).** *If the standard for a  $L_{dn}$  not in excess of 60 dB is applied:* Increase the height and extend the length of the proposed noise mitigation feature.

Both the Cooperative Plan and the Preferred Plan propose a 16-foot-high landscaped berm meandering through the golf course, approximately midway between the freeway and the residential area nearest to the freeway. To achieve exterior noise levels of 60 dB, the berm would have to be increased to a height of 17 feet; it would also have to be extended north from the ending point proposed in the two plans, and then east along the east-west road at the first intersection in that area. (A soundwall 20 feet high would achieve the same noise reduction.)

Alternative 2 proposes a 16-foot-high landscaped berm located immediately adjacent to I-680. As noted in the "Effectiveness of Alternative Noise Mitigation Strategies" section, a berm in this location would have to be 30+ feet high to achieve noise reduction to 60 dB across the Central Parcel. This berm would also have to be extended, either north along the freeway or east along the boundary between residential and nonresidential uses, to reduce noise on the northerly residential parcel.

**Measure L1c(2).** *If the standard for a  $L_{dn}$  not in excess of 65 dB is applied:* The landscaped berm located midway between the freeway and the residential area nearest to the freeway could be reduced in height to 13 feet, but would have to be extended northerly of the proposed ending point.

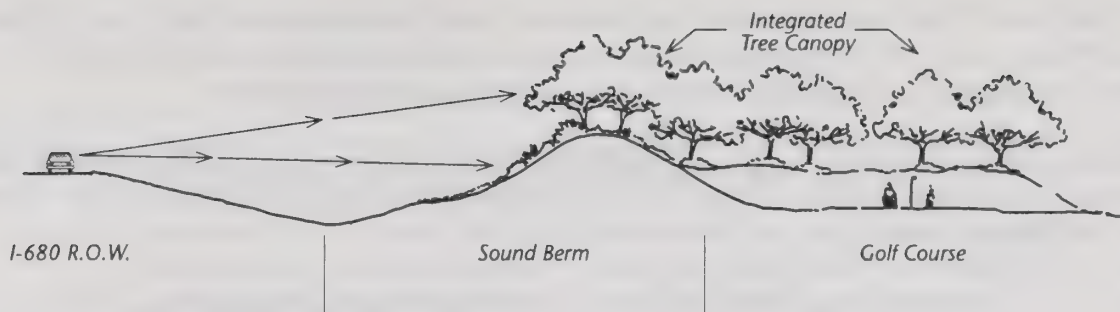
To achieve exterior noise levels of 65 dB, a berm located adjacent to the residential area nearest to the freeway could be reduced in height to 7 feet. The length of the berm would still have to be extended as described in Measure L1c(1) to protect homes in the northern portion of the Central Parcel.

**Measure L1c(3).** *If mitigations that would reduce exterior noise levels to comply with the adopted standard (60 dB or 65 dB) cannot feasibly be implemented:* Require detailed project-specific noise studies for each development project in an area where the standard is exceeded to characterize noise conditions and to identify the noise reduction features that must be incorporated to achieve acceptable interior noise levels, and require incorporation of those features into construction.

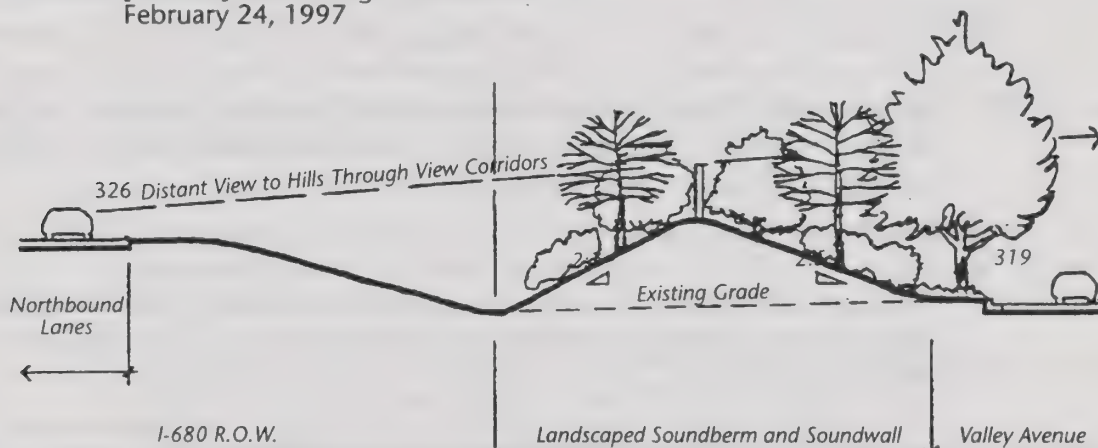
Same as Measure L1a(3).

An additional option, not explored in the Cooperative Plan/Preferred Plan, would be the construction of a berm directly adjacent to the residential development so that the golf course is interposed between the residential development and the freeway. The landscaped berm concept is illustrated on Figure 31. If such a berm is located back near the residential development, would only have to be 11 feet high to shield the rear yards of these homes to a  $L_{dn}$  of 60 dB; alignment of an 11-foot berm near the residential units is recommended if the 60 dB standard is applied to this project. This option is not recommended because (1) it is inconsistent with the project sponsor's objectives, which include provision of a golf course-oriented residential community, (2) it would not mitigate noise levels on the golf course, and (3) it would not address safety and liability concerns related to potential conflicts between golf course play and traffic on I-680.

If the City's criterion of significance is a  $L_{dn}$  of 60 dB for residential development, then the implementation of Measure L1c(1) would reduce the impact to a less-than-significant level.



Source: [Revised] Draft Design Guidelines  
February 24, 1997



Source: County Specific Plan, Fig 6-11

Horizontal configuration varies by alternative

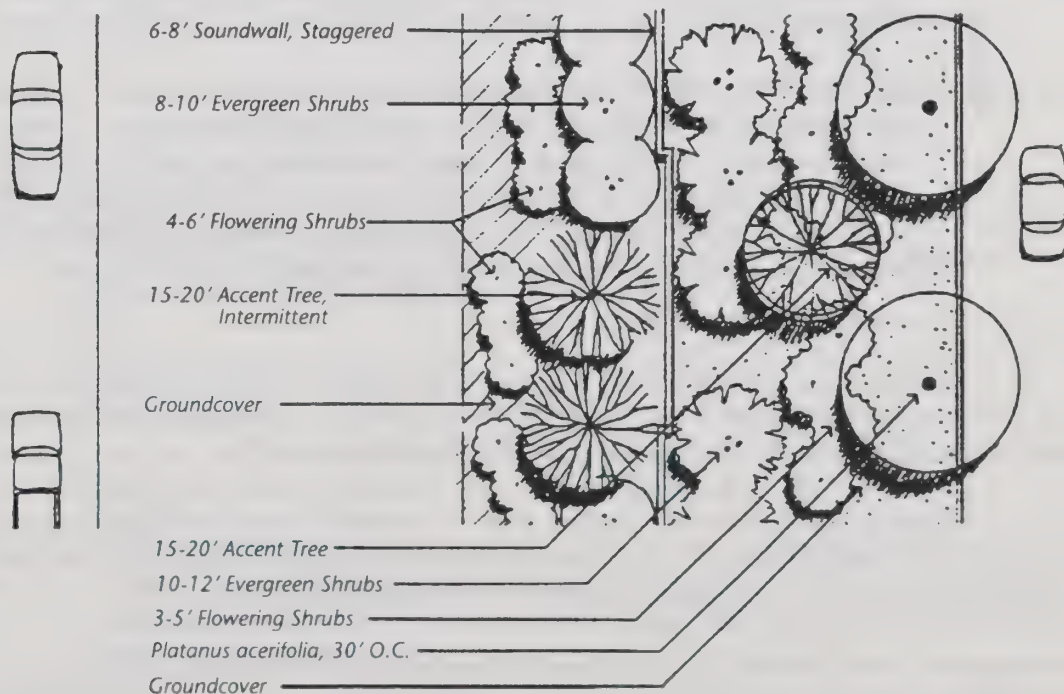


Figure 31

## Concept Diagram of Landscaped Sound Berm

Source: County Specific Plan, Fig 6-11



If the City's criterion of significance for outdoor noise in residential areas is 65 dB, as allowed by the General Plan in cases where meeting 60 dB is deemed to be not feasible or reasonable, then the implementation of the Measure L1c(2) would reduce impacts to a less-than-significant level.

If measures required to achieve the City's criterion of significance for exterior noise in residential areas are not feasible, then implementation of Measure L1c(3) would be required but would not reduce impacts to a less-than-significant level.

**Impact L1d.** Proposed single-family residential development on the Central Parcel between Bernal Avenue and the south end of the Village Center would be exposed to a  $L_{dn}$  of greater than 60 dB.

**Measure L1d(1).** *If the standard for a  $L_{dn}$  not in excess of 60 dB is applied:* Increase the height and extend the length of the noise mitigation feature proposed for that portion of the Central Parcel south of the Village Green.

Same as Measure L1c(1).

**Measure L1d(2).** *If the standard for a  $L_{dn}$  not in excess of 65 dB is applied:* Extend the length of the noise mitigation feature proposed for that portion of the Central Parcel south of the Village Green.

A few homes – those closest to the freeway – would be exposed to noise levels in excess of 65 dB. To mitigate exterior noise levels at these homes, the noise mitigation feature (berm or soundwall) must be extended north and east. The extension described in this measure would be incorporated in the extension described above as part of Measure L1c(2).

**Measure L1d(3).** *If mitigations that would reduce exterior noise levels to comply with the adopted standard (60 dB or 65 dB) cannot feasibly be implemented:* Require detailed project-specific noise studies for each development project in an area where the standard is exceeded to characterize noise conditions and to identify the noise reduction features that must be incorporated to achieve acceptable interior noise levels, and require incorporation of those features into construction.

Same as Measure L1a(3).

If the City's criterion of significance is a  $L_{dn}$  of 60 dB for residential development, then the implementation of Measure L1d(1) would reduce the impact to a less-than-significant level.

If the City's criterion of significance for outdoor noise in residential areas is 65 dB, as allowed by the General Plan in cases where meeting 60 dB is deemed to be not feasible or reasonable, then the implementation of the Measure L1d(2) would reduce impacts to a less-than-significant level.

If measures required to achieve the City's criterion of significance for exterior noise in residential areas are not feasible, then implementation of Measure L1d(3) would be required but would not reduce impacts to a less-than-significant level.

**Impact L2.** Proposed commercial/office land uses within the project area would be exposed to exterior noise levels in excess of a  $L_{dn}$  of 70 dB.

**Measure L2.** Incorporate sound-reducing building components in commercial and office portions of the project that are exposed to exterior noise levels exceeding 70 dB  $L_{dn}$ .

To conform to the General Plan, interior noise levels in offices generally should be maintained at 45 Leq or less. Acoustical designs to achieve this level should be demonstrated by the project sponsor in sufficient detail to satisfy City staff and OSHA requirements.

Implementation of Measure L2 would mitigate Impact L2 to a less-than-significant level.

**Impact L3a.** Some portions of the proposed golf course would be exposed to noise levels in excess of a  $L_{dn}$  of 65 dB.

**Measure L3a.** Locate the noise mitigation feature on the Central Parcel south of the Village Green adjacent to the freeway and construct it to a height that will reduce noise exposure on the golf course to acceptable levels.

A landscaped berm 18 feet high or a soundwall 21 feet high would reduce the noise level to 65 dB across the site, including all areas of the golf course.

The proposed noise mitigation feature on the West Parcel along I-680 would mitigate noise levels on portions of the golf course west of the freeway to acceptable levels.

Implementation of Measure L3a would mitigate Impact L3a to a less-than-significant level.

**Impact L3b.** Portions of the proposed community park (on the Central Parcel) adjacent to Bernal Avenue would be exposed to noise levels in excess of a  $L_{dn}$  of 65 dB.

**Measure L3b.** Design the community park so that uses that benefit most from noise levels in the “normally acceptable” range are located in the portions of the park where noise exposure is lower than 65 dB.

Implementation of Measure L3b would mitigate Impact L3b to a less-than-significant level.

**Impact L3c.** Portions of the proposed neighborhood park on the West Parcel adjacent to Bernal Avenue would be exposed to noise levels in excess of a  $L_{dn}$  of 65 dB.

**Measure L3c.** Design the neighborhood park on the West Parcel so that uses that benefit most from noise levels in the “normally acceptable” range are located in the portions of the park where noise exposure is lower than 65 dB.

Implementation of Measure L3c would mitigate Impact L3c to a less-than-significant level.



**Impact L3d.** The neighborhood park and open space area on the East Parcel would be exposed to noise levels in excess of a  $L_{dn}$  of 65 dB.

**Measure L3d. None.**

No feasible measure is available to mitigate noise at this location.

Impact L3d is significant and not mitigatable.

**Impact L4.** Noise levels generated by the proposed fire station would be significant at noise sensitive receptors.

**Measure L4. Locate the fire station farther from, or in an area not surrounded by, residential or other noise sensitive uses.**

Implementation of Measure L4 would mitigate Impact L4 to a less-than-significant level. If such a relocation is not possible, this would remain an unavoidable adverse impact.

**Impact L5.** Outdoor noise levels along railroad tracks would exceed the threshold at which controls are required to reduce interior noise levels.

**Measure L5. Require a combination of soundwall and construction techniques, such as sound rated windows and walls, in residential units near the railway that are (or would be, with future rail service) exposed to exterior maximum train passby noise levels of 75 dBA or more.**

The mitigation strategy along the railroad lines would take the form of treatment to the units to assure that the City's guidelines for maximum instantaneous noise levels not greater than 50 dBA in bedrooms and 55 dBA inside other rooms would be achieved. Since the  $L_{dn}$  generated by the railroad activity on both lines would be less than 70 dB, outdoor noise levels would be considered compatible adjacent to the railroad tracks. This mitigation strategy would be effective and would meet the guidelines of the City's Noise Element.

Implementation of Measure L5 will achieve the City standards and result in a "normally acceptable" noise exposure for homes along the rail corridor(s), thus reducing Impact L5 to a less-than-significant level.

**Impact L6.** Construction activity would raise noise levels in selected residential areas to unacceptable levels.

**Measure L6a. Limit construction activities as appropriate to each development unit.**

At the beginning of project development, few restrictions may be necessary as construction activity may be located at substantial distances from existing residences and other sensitive receptors. As development progresses, it will be appropriate to limit activity in locations close to then-existing residential uses and other sensitive receptors to weekdays between 7:30 AM and 5:30 PM, with no construction to be allowed on holidays and weekends.

All equipment used on the project should be adequately muffled and maintained.

**Measure L6b: Require conformance with other standard Pleasanton construction noise mitigation regulations and procedures.**

Implementation of Measures L6a and L6b would mitigate Impact L6 to a less-than-significant level.

## 6. Summary Comparison of Impacts and Mitigated Impacts: Noise

	Cooperative Plan		Preferred Plan (Alternative 1)	
	60 dB	65 dB	60 dB	65 dB
<i>If standard for exterior noise level in residential areas is:</i>				
<b>Impact L1a(1).</b> Proposed residential development on the West Parcel north of the I-680 overcrossing of the Pleasanton Avenue extension would be exposed to a $L_{dn}$ of greater than 60 dB.	S/LS	n.a.	S/LS	n.a.
<b>Impact L1a(2).</b> Some proposed residential development on the West Parcel north of the I-680 overcrossing of the Pleasanton Avenue extension would be exposed to a $L_{dn}$ of greater than 65 dB.	S/S	S/LS	S/S	S/LS
<b>Impact L1b.</b> Proposed residential development on the West Parcel south of the I-680 overcrossing of the Pleasanton Avenue extension would be exposed to a $L_{dn}$ of greater than 60 dB.	S/S (NM)	LS/*	S/S (NM)	LS/*
<b>Impact L1c(1).</b> Proposed residential development on the Central Parcel south of the Village Center would be exposed to a $L_{dn}$ of greater than 60 dB.	S/LS	n.a.	S/LS	n.a.
<b>Impact L1c(2).</b> Some proposed residential development on the Central Parcel south of the Village Center would be exposed to a $L_{dn}$ of greater than 65 dB.	S/S	S/LS	S/S	S/LS
<b>Impact L1d.</b> Proposed single-family residential development on the Central Parcel between Bernal Avenue and the south end of the Village Center would be exposed to a $L_{dn}$ of greater than 60 dB.	S/LS	S/LS	S/LS	S/LS

Key: \*/\*: significance before mitigation/significance after mitigation.  
 S: significant (C): contributes to cumulative impact  
 LS: less than significant n.a.: impact does not apply to this alternative  
 \* no mitigation required ND: not determinable  
 † Less than significant before mitigation, but contributes to cumulatively significant impact.  
 NM: no mitigation possible (beyond policies, programs, and other regulations already in place).



	Cooperative Plan	Preferred Plan (Alternative 1)
<i>Assumes Pleasanton General Plan significance criteria (see pp. 230-233)</i>		
<b>Impact L2.</b> Proposed commercial/office land uses within the project area would be exposed to exterior noise levels in excess of a $L_{dn}$ of 70 dB.	S/LS	S/LS
<b>Impact L3a.</b> Some portions of the proposed golf course would be exposed to noise levels in excess of a $L_{dn}$ of 65 dB.	S/LS	S/LS
<b>Impact L3b.</b> Portions of the proposed community park (on the Central Parcel) adjacent to Bernal Avenue would be exposed to noise levels in excess of a $L_{dn}$ of 65 dB.	S/LS	S/LS
<b>Impact L3c.</b> Portions of the proposed neighborhood park on the West Parcel adjacent to Bernal Avenue would be exposed to noise levels in excess of a $L_{dn}$ of 65 dB.	S/LS	S/LS
<b>Impact L3d.</b> The neighborhood park and open space area on the East Parcel would be exposed to noise levels in excess of a $L_{dn}$ of 65 dB.	S/S (NM)	S/S (NM)
<b>Impact L4.</b> Noise levels generated by the proposed fire station would be significant at existing noise sensitive receptors.	S/LS	S/LS
<b>Impact L5.</b> Outdoor noise levels along railroad tracks would exceed the threshold at which controls are required to reduce interior noise levels.	S/LS	S/LS
<b>Impact L6.</b> Construction activity would raise noise levels in selected residential areas to unacceptable levels.	S/LS	S/LS

Key: \*/\*: significance before mitigation/significance after mitigation.  
S: significant (C): contributes to cumulative impact  
LS: less than significant n.a.: impact does not apply to this alternative  
\* no mitigation required ND: not determinable  
† Less than significant before mitigation, but contributes to cumulatively significant impact.  
NM: no mitigation possible (beyond policies, programs, and other regulations already in place).

## M. CULTURAL RESOURCES

### 1. Setting

#### a. Site Conditions

The description of the setting draws primarily on Appendix E of the City DEIR (William Self Associates; complete citation in Chapter 9), which contains an extensive description of the cultural setting (history, prehistory, and ethnography) of the project area.

There have been archeological surveys in the vicinity of the project site on several occasions since the 1970s. The entire project area was subjected to a field investigation conducted in 1986.<sup>64</sup>

A cultural resources site was identified in a 1987 archeological reconnaissance of the area developed as the Laguna Oaks project, northwest of the project site. This site, identified by number CA-Ala-483, was the subject of an archeological survey program conducted in 1987, 1988, and 1989. Findings from the 1987 research included extensive subsurface deposits and a rock used for seed and nut grinding on the surface. Excavation (47 trenches) recovered 206 artifacts. Additional excavation (14 trench and test units) was conducted in 1989. The results of the testing program were used in tentatively interpreting this site as a large, dispersed, low-density village. Prehistoric burials were found in the 1987 and 1989 excavations.<sup>65</sup> These were removed and reburied in the Ohlone Cemetery at Mission San Jose in Fremont in consultation with Andrew Galvan, an Ohlone Most Likely Descendent.

An extension of site CA-Ala-483 exists in the northwest area of the project site, between the Arroyo de la Laguna and I-680, as revealed by subsurface archeological testing in 1988 (19 trenches to depths averaging 10 meters). Materials revealed at this location consisted of a midden with flaked-stone artifacts and fire-altered rock ranging in depth between approximately 1.3 to 5.9 feet.

A second site within the project area, east of I-680 near Bernal Avenue, was found in the 1988 field investigation. This site, designated as CA-Ala-554, was subject to a single trench excavation in 1988 that exposed a dry, ashy midden deposit. Fire-altered rock, bone and shell fragments, flaked stone artifacts, and bird-bone tool remains were found. The boundaries of this site have not been determined.<sup>66</sup>

No structures remain from the mid-19th century (1849-79) and there are no buildings on the site that are of historical significance (County EIR, pp. 4.16-6,7).

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<sup>64</sup> Reported in the County EIR, p. 4.16-2. Cultural resources investigations in the site vicinity have been reported by Holman (responsible for the field investigation), 1986; Peak and Associates, 1987; San Francisco, 1988; and Bard, *et al.*, 1992. A full bibliography is presented in Appendix E to the *DEIR, Rezoning RZ-94-07 and Annexation*, City of Pleasanton, March 1995.

<sup>65</sup> A prehistoric human burial is a burial that took place before history was recorded. Analysis of a double interment (or burial) on the site concluded, based on radiocarbon dating of associated material, that it occurred 3,200± years ago. (Peak and Associates, 1987)

<sup>66</sup> *Environmental Baseline Report*, November 1988 (complete citation in Chapter 9).



## **b. Assessment Criteria**

CEQA (Guidelines, Appendix K) directs public agencies to “avoid damaging effects on an archeological resource whenever feasible. If avoidance is not feasible, the importance of the site shall be evaluated ...” as a means of determining impact and developing mitigation measures. The evaluation considers visual surface and subsurface evidence at each site location, information gathered during the literature and record searches, and the researcher’s knowledge of and familiarity with the historic or prehistoric context associated with each site in determining whether it constitutes an “important archeological resource,” defined as one that:

- A. Is associated with an event or person of (1) recognized importance in California or American history, or (2) recognized scientific importance in prehistory.
- B. Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable or archaeological research questions;
- C. Has special or particular quality such as oldest, best example, largest or last surviving example of its kind;
- D. Is at least 100 years old and possesses substantial stratigraphic integrity; or
- E. Involves important research questions that historical research has shown can be answered only with archaeological methods.

City policy regarding cultural resources is grounded in state law, including specific requirements established in the California Environmental Quality Act. To evaluate cultural resource sites against CEQA criteria requires consideration of, among other things, the overall integrity of the site, the regional culture history (the types, ages and distribution of other sites in the region) and the nature of questions that researchers are attempting to address regarding the history or prehistory of the region.

## **2. Impacts**

### **a. Impacts of the Cooperative Plan and the Preferred Plan**

Development of the site pursuant to the Cooperative Plan or the Preferred Plan would result in ground-disturbing actions that pose a possibility of adverse impacts on cultural resources associated with one of the known sites or on resources not yet identified (because no subsurface exploration has yet taken place, or because past exploration is now dated). Development of the site could result in the discovery of additional human remains at identified and unidentified subsurface sites if construction disturbs the deposits. Development on the site could also preclude future non-intrusive investigation of resources.

The sites are considered important under CEQA criteria B, D and E because they contain information that is useful in addressing scientifically consequential archeological research questions, are at least 100 years old, possess stratigraphic integrity, and involve research questions that can be addressed only through archeological methods.

The types of land development activities and land uses proposed can affect known or unknown cultural resources in various ways:

- Mass site grading and site preparation activities.

- Excavation required for construction of buildings could disturb known or unknown buried resources. Single family homes and single-story nonresidential buildings, which require less excavation, are considered less likely to disturb such resources than multi-story multiple family residential structures or multi-story office and retail buildings, which generally require deeper excavations.
- Construction/installation of infrastructure facilities such as water and sewer lines, subsurface drainage lines (including enlargement of existing lines), a recycled water line (if one is extended to the site), and the flood control bypass proposed for the golf course under the Cooperative Plan.
- Grading and excavation required for the golf course, including water features and the proposed bypass swale.
- Construction of roads and parking areas. These uses would involve minimal ground disturbance and, therefore, are somewhat less likely to affect cultural resources.

For project components requiring minimal excavation, or sites which would be subject to emplacement of fill prior to development (thereby reducing or eliminating the need for excavation below existing ground level), the placement of structures would nevertheless make future research on any underlying cultural resources impractical.

**Impact M1. Potential for future development of the study area to disturb cultural resources not yet identified.**

Given the high archeological potential of the area and the fact that the only previous survey of the entire project site was undertaken under less than optimal conditions,<sup>67</sup> it is possible that additional historic or prehistoric sites or resources may exist in the project area.

**Impact M2. Potential for future development of the project area to disturb identified sites or resources.**

Ground-disturbing activities associated with site development permitted by the specific plan would have a potentially adverse effect on prehistoric sites CA-Ala-483 and CA-Ala-554, both lying at least partly within the project area.

Reconfiguration of the I-680/Bernal Avenue interchange may include construction of a new southbound offramp on lands outside the project site, in the northwest quadrant of the interchange. (See discussion p. 198 and Figure 27, p. 199). This would be a separate project subject to its own environmental review.

**Impact M3. Potential for future development to be located on identified sites, which could preclude future evaluation of known resources.**

<sup>67</sup> As noted in the Appendix E to the *DEIR, Rezoning RZ-94-07 and Annexation*, City of Pleasanton, March 1995, 1986 surface inspection of the project area was hindered by crop growth, evidenced by the failure to observe surficial archeological materials that were subsequently located and tested in 1987, 1988 and 1989.



## **b. Impacts of Alternative 2**

Impacts associated with Alternative 2 are the same as those identified for the Cooperative Plan and the Preferred Plan.

## **c. Impacts of Alternative 3**

The impacts of Alternative 3 are discussed in the County EIR, Chapter 4.16.

## **3. Mitigation Measures**

**Impact M1.** Potential for future development of the study area to disturb cultural resources not yet identified.

Previous cultural resources surveys were undertaken 10 years ago and under conditions not suitable for site identification. Pleasanton staff observe that, over time, heavy winter rains, agricultural operations, and burrowing rodents' activities may often expose additional site materials. Therefore, discovery of such resources appears likely where ground cover does not obscure the ground surface.

In order to minimize the risk of adverse impact to unknown cultural resources by development-related grading, excavation, or construction activities, the site should be subject to a cultural resources survey conducted by a state-approved archeologist.

**Measure M1a.** Prior to approval of any grading or development plans, including infrastructure plans, complete an intensive cultural resources survey of the study area.

In order to more accurately assess the potential impact of any future development of the area, it is recommended that the entire parcel be subject to an intensive cultural resource survey to identify any surficial indicators of historic and prehistoric sites within the project area and properly mitigate the impacts of proposed improvements on cultural resources. In this context, "intensive" means that a qualified archaeologist walks through the site on transects that are no more than 30 meters apart. This type of investigation provides clearance-level coverage for the site.

Any cultural resources identified as a result of the survey would be subject to mitigation as described under M2.

**Measure M1b.** In the portions of the project area not currently known to contain archeological resources, grading and site preparation activities will be subject to monitoring by a qualified archeologist.

A qualified archeologist shall be present on the project site during site grading. If any cultural resources are uncovered during site preparation activities, land-disturbing activities will be discontinued within a 35-foot radius until the find can be evaluated by the monitoring archeologist and appropriate mitigation can be determined. (See Measure M1c.)

**Measure M1c.** If archaeological resources are identified during mass site grading and preparation activities, the archaeologist shall recommend actions to identify and protect potential resources for implementation during subsequent site-specific grading.

**Impact M2.** Potential for future development of the study area to disturb identified sites or resources.

**Measure M2.** Assure the protection of important cultural resources during site planning and development.

- (a) The development plan for the site should provide for preservation of known cultural resources through open-space declaration, avoidance, or “capping.”

Land use designations may constitute “avoidance” or “capping” if the site for a particular use requires no soil disturbance for site preparation or if the existing ground surface is overcovered by additional soil or paving prior to site development, such that no disturbance of the underlying soils that could potentially affect cultural resources occurs. In the Cooperative Plan and the Preferred Plan, the neighborhood park in the northwest corner of the West Parcel and the Village Center parking lots would meet this definition.

*If known sites cannot be avoided:*

- (b) Develop and implement a Resources Recovery Plan at known sites.

The Plan should be designed and implemented to gather a sufficient quantity and diversity of data types at each site, and/or set aside a sufficient portion of each site for potential later investigation, to consider the loss a less-than-significant impact. No land-disturbing activities associated with site preparation and/or development will be permitted until the Resources Recovery Plan is prepared and accepted by the City. Similarly, no land-disturbing activities may be undertaken on the portion of the site set aside for potential later investigation until that investigation has taken place.

*and*

- (c) Assure protection of cultural resources consistent with the Resources Recovery Plan during all stages of site preparation and construction activities in the study area. Protective measures include the following:

- A Society of Professional Archeologists (SOPA)-qualified archeologist will be present during any and all ground disturbing activities in the vicinity of prehistoric sites CA-Ala-483 and CA-Ala-554.
- In the event that a significant resource or feature is encountered during construction or monitoring, permit the archeologist to analyze the find sufficiently to determine, in consultation with City staff, the appropriate course of action.
- If a burial site or sites are discovered, consult with City staff and tribal representatives to determine the appropriate disposition of the findings.

Relocation of archaeological resources is not considered mitigation, and is considered a significant impact, by the Native American community, even if the relocated resources are preserved. Even with implementation of Measures M1a through M1c and Measure M2a or Measure M2b in combination with Measure M2c, 100 percent avoidance or recovery of archaeological and historic resources cannot be guaranteed. Therefore, the degree to which potential impacts on archaeological resources in identified and unidentified sites could be mitigated cannot be determined at the present time. A potential impact remains even with the implementation of these measures.



**Impact M3.** Potential for future development to be located on identified sites, which could preclude future evaluation of known resources.

**Measure M3.** Document the archeological findings at the site in a report meeting professional standards, and file the report with appropriate State and City offices.

The City may require that the findings be referenced in any deed and/or subsequent transfer of legal title to the property.

Implementation of Measure M3 would reduce Impact M3 to a less-than-significant level.

#### **4. Summary Comparison of Impacts and Mitigated Impacts: Cultural Resources**

	<b>Cooperative Plan</b>	<b>Preferred Plan (Alternative 1)</b>
<b>Impact M1.</b> Potential for future development of the study area to disturb cultural resources not yet identified.	S/ND	S/ND
<b>Impact M2.</b> Potential for future development of the study area to disturb identified sites or resources.	S/ND	S/ND
<b>Impact M3.</b> Potential for future development to be located on identified sites, which could preclude future evaluation of known resources.	S/LS	S/LS

Key: \*/\*: significance before mitigation/significance after mitigation.

S: significant (C): contributes to cumulative impact

LS: less than significant n.a.: impact does not apply to this alternative

\* no mitigation required ND: not determinable

† Less than significant before mitigation, but contributes to cumulatively significant impact.

NM: no mitigation possible (beyond policies, programs, and other regulations already in place).

## N. VISUAL RESOURCES

### 1. Characteristics of the Project

The project would introduce major urban development into a site currently undeveloped except for transportation uses. Buildings (1,900 residential units and  $\pm 577,000$  square feet of retail and office space, as well as civic and recreation-related buildings) and open space designed to serve specific functions would replace mostly open lands, dramatically altering the appearance of the site.

### 2. Setting

The discussion of the visual setting and impacts is based on site reconnaissance by the EIR consultant, visual simulations prepared by Environmental Vision (Berkeley), and published background materials (complete citations are provided in Chapter 9), including:

Pleasanton General Plan, 1986 and 1996

*Preliminary Site Analysis*, Ted C. Fairfield

*Environmental Baseline Report* (including *Technical Appendices*), City and County of San Francisco, November, 1988, and

*Informational Report Regarding the SFWD Lands in Pleasanton "Preferred Plan"*

Additional photographs of the site and its context appear in the Fairfield report (between pp. 11 and 12) and in the *Environmental Baseline Report* (pp. 89-91); these documents may be reviewed at the office of the Pleasanton Planning Department.

#### a. Background

Eastern Alameda County has many visual features – prominent peaks and ridgelines, rolling hills, agricultural lands, picturesque canyons, arroyos, and reservoirs – that are integral to the visual character of the area. New development must be sensitive to these features in order to preserve this visual character.

Ridgelines provide a dramatic backdrop for many views from the project area. Grassy hills constitute the middle-ground view for much of the project area. Because of their high visibility and relative lack of vegetation, any development on the hills or alteration of their shape significantly affects the visual quality of the area surrounding them.

#### b. Existing Visual Conditions

(1) Context. The project area is at the western edge of the Amador Valley at an elevation of  $\pm 380$  feet. To the west lies the northwest-trending Pleasanton Ridge, which rises some 880 feet above the valley floor (to a maximum elevation of 1,264 feet). To the southwest lies a series of 1,200- to 1,600-foot hills.

(2) Project Site. Site topography is relatively flat except for (a) the elevated roadbed of I-680, which bisects the site north to south, and (b) in the southeast corner, a grass-covered knoll with scattered Valley oaks. Land cover consists of oak savannah on the knoll; cultivated hayfields; and brush and mature riparian trees in the narrow, deeply-incised channel of the Arroyo de la Laguna on the western edge of the site. A cluster of mature trees in the center of the West Parcel marks the site of the former farmstead.



These site conditions are illustrated in the photograph in Figure 32. Due to the age of the photograph (approximately 1986), development in the area around the site (including the Pleasanton Middle School at Bernal Avenue and Case Avenue, the Bernal Business Park across Bernal Avenue from the site, and residential development between the Arroyo and Foothill Road) are not shown.

**(3) Visual Resources.** The project site lies in the context of developed Pleasanton to the west, north, and east. The agricultural use gives the site a rural character and provides an open foreground to views of the hills surrounding the Livermore-Amador Valley. The visual quality of the site at present is established by its undeveloped condition and its containment within clearly-defined boundaries; generally, the Arroyo on the west, Bernal Avenue on the north, the Alameda County transportation corridor on the east, and, along the irregular southern boundary, portions of the transportation corridor and of I-680. The site adjoins a major “gateway” to Pleasanton (I-680/Bernal Avenue).

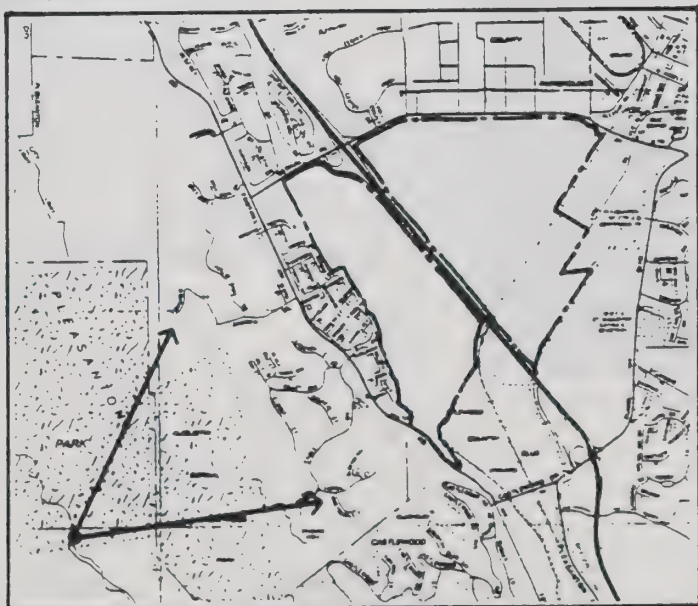
Visual resources of the site include the following:

- **Views from I-680.** I-680 is a designated scenic corridor through the site, affording views into the site both to the east and to the west, as well as distant vistas to the hills encompassing the Livermore-Amador Valley.
  - ◻ **I-680 Southbound.** From I-680 southbound, the project area is first visible from the Bernal Avenue overpass. The motorist is about twenty feet above project area grade and can see, toward the east, mid-range panoramic views with the Central Parcel in the foreground against the backdrop of 1,000-foot hills farther east. Toward the west, the foreground view is into the West Parcel against a closer backdrop of Pleasanton Ridge. As shown in Figure 33A, a visually prominent feature on the West Parcel is the cluster of trees at the site of the former farmstead; the dense riparian vegetation along the Arroyo is also visible.
  - ◻ **I-680 Northbound.** From I-680 northbound, the project area is first visible from the Union Pacific overpass as traffic emerges from the screening of the highway cut bank on the southwest side of the knoll. Panoramic views of the entire project area are possible, with distant views of Mt. Diablo to the north and mid-range views of Pleasanton Ridge to the west. Figure 33B provides a view from the knoll of the Central Parcel looking north.
- **Views of and from the knoll.** Where I-680 enters the study area from the south at the southeastern corner of the site, it crosses the west edge of an 80-foot knoll that is the site’s principal topographic feature. Views of and from the knoll are of scenic importance.
- **Bernal Avenue corridor: views.** There is an interrupted corridor of major trees (sycamores and walnuts) along both sides of Bernal Avenue and in the median strip. This corridor is a prominent visual feature particularly of the Central Parcel. Figure 34A is a view of the corridor in the eastbound direction showing the trees lining the north side of Bernal and in the median. Trees on the south side partially screen views into the Central Parcel from east- or westbound vehicles on Bernal Avenue.

Westbound on Bernal Avenue, Pleasanton Ridge forms a continuous scenic backdrop, as shown in Figure 34B. West of I-680, filtered views of the West Parcel are possible from Bernal Avenue, including scenic views of riparian trees along the Arroyo de la Laguna.



**Key Map**



Source: County EIR, Figure 4.11-1  
 This figure dates from approximately 1986.  
 Development since that time has occurred  
 west, north and east of the site.

*Figure 32*  
**Overall View of  
 the Project Area  
 from Pleasanton Ridge**

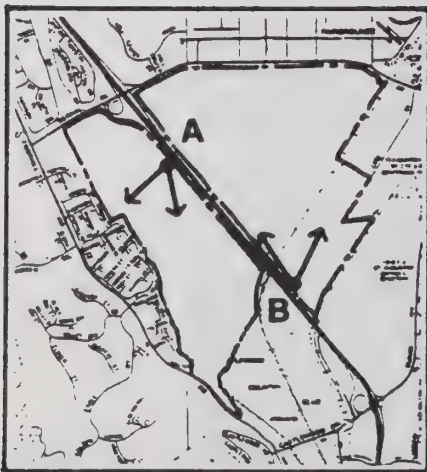




A - View of the Western Parcel from I-680 Looking West



B - View of the Central Parcel from the Southern Knoll Looking North



Key Map

Source: County EIR, Figure 4.11-2

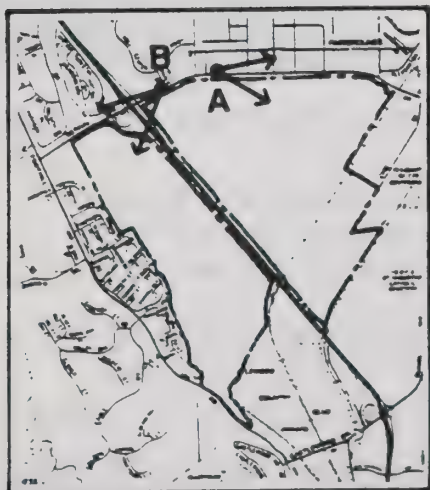
Figure 33  
Views of the Project Site  
from along I-680



A - View from Bernal Avenue Looking East



B - View from Bernal Avenue Looking West



Key Map

Source: County EIR, Figure 4.11-3

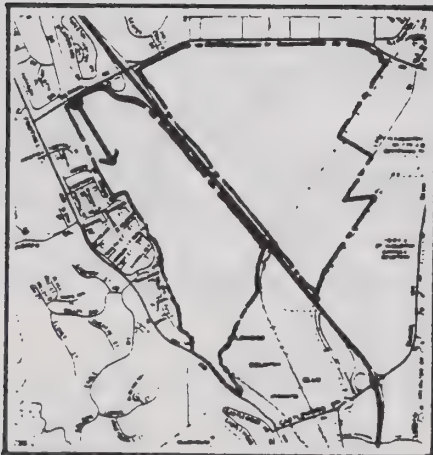
Figure 34  
Views of the Project Area  
from along Bernal Avenue



- **Bernal Avenue corridor: character.** Entries into Pleasanton from I-680 are characterized by a “relative softness of appearance and landscape quality. Bernal Avenue is a very strong visual entry created by its large trees, swale median, and curbless edges – all reminiscent of the area’s early rural character.” (Pleasanton General Plan, p. X-3)
- **Arroyo de la Laguna riparian corridor.** The Arroyo is bordered by vegetation along its length, which not only separates the study area visually from the residential lands to the west, but provides visual relief in what is otherwise a mostly flat and treeless area. The view of Arroyo de la Laguna looking south from the Bernal Avenue bridge is one of tall, dense, riparian trees and dense under-story shrubs (Figure 35).



View of the Arroyo de la Laguna



Key Map

Figure 35  
Views of the Arroyo de la Laguna  
from Bernal Avenue Bridge

- **Major vegetation.** There are other stands of significant trees on the site, including a grove of willow trees northeast of the knoll, scattered live oaks on the knoll, and a wind row and a palm tree adjacent to the former farmstead site on the West Parcel. Many of these trees, as well as many of the street trees on Bernal Avenue and the riparian trees along the Arroyo, meet Pleasanton's definition of a "heritage tree": trunks over 55 feet in circumference and/or total tree height greater than 35 feet. (Heritage trees are discussed in Chapter 5, Part O (Biology); a preliminary inventory is presented in Appendix F).
- **Views from the site.** The site commands extensive views, particularly of the ridgeland to the west and south, and of Mount Diablo and its southern foothills to the north. Views from the site of immediately adjacent areas are generally typical of an urban setting. The only unusual land use in the area is the Alameda County Fairgrounds across Bernal Avenue. The Bernal frontage of the fairgrounds site is used for parking during fair events but, for much of the year, it looks less like a parking area than an orchard of widely-spaced trees.

## **2. Impacts**

### **a. Significance Criteria**

A particular development or feature of development would be found to have an adverse impact on visual resources if it were to:

**(1) Affect a scenic vista or scenic highway** (CEQA, Appendix I, XIII.(a)), such as by significantly reducing "green" views into the site from I-680 or Bernal Avenue. General Plan references:

Cons. and Open Space Program 5.2: Implement the recommendations contained in the Scenic Highway Plan for I-680. That plan lists three important targets for preservation: existing stands of vegetation, views to surrounding hills, and open space vistas along the route.

Community Character Policy 10: Require the treatment of future soundwalls with landscaping and design features.

**(2) Impair views into and beyond the site** from public ways through and adjacent to the site. General Plan reference:

Cons. and Open Space Policy 5: Preserve as permanent open space all areas of outstanding scenic qualities or areas which provide extraordinary views of natural...objects.

**(3) Diminish the value of the knoll as a visual resource**, whether by excessive grading/site contouring, or construction of buildings, or loss of characteristic vegetation. General Plan reference: Cons. and Open Space Policy 5, cited at (2), above.

**(4) Permanently alter the "natural" character of the Arroyo** (its depth and dense vegetation make it look not only "natural" but wild). General Plan references:

Cons. and Open Space Policy 3: Preserve and enhance stream beds and channels in a natural state, except where needed for flood and erosion control.

Cons. and Open Space Program 3.4: Design projects adjacent to the arroyos to protect habitat areas.



**(5) Eliminate major vegetation without equivalent replacement.** General Plan references:

- Cons. and Open Space Policy 2: Preserve heritage trees throughout the Planning Area.
- Community Character Program 9.1: Complete and infill the street tree and median landscaping along... Bernal Avenue.

**(6) Fail to enhance the site as a Pleasanton "gateway",** a function it serves due to its location on I-680 and Bernal Avenue. The Bernal Avenue frontage of the Central Parcel is the important "gateway" area. General Plan references:

- Community Character Policy 8: Improve the visual quality of entries to Pleasanton
- Community Character Program 8.1: Adopt a plan to install distinctive landscaping at... City entry locations [including] Bernal Avenue/I-680.
- Community Character Program 8.2: Land use planning in areas adjacent to City entries should be particularly sensitive to aesthetic considerations.
- Community Character Policy 9: Provide significant landscaping along all arterial streets leading from City entries to the Downtown.

**(7) Create light or glare** (CEQA, Appendix I, XIII (c)).

**(8) Have a substantial, demonstrable negative aesthetic effect** (CEQA, Appendix G (b) and Appendix I, XIII (a)). A project that adversely affected the visual quality of its offsite environment would be found to have an adverse visual impact.

**b. Impacts of the Cooperative Plan, the Preferred Plan, and Alternative 2**

Development permitted by the specific plan would introduce development of an urban-scale and intensity into an area that, at present, is essentially rural in character. Such development would change the visual quality of the environment and present the possibility of adverse visual impacts. These are described in the same general order as the statements of impact criteria above.

**(1) Development of the Site, Including Introduction of Barriers along Roadways, Would Alter Views into and Beyond the Site**

Implementation of the project under the Cooperative Plan or Alternatives 1, 2, and 3 would affect views into and beyond the site by replacing mostly-open land with developed uses and by introducing visual barriers along I-680 and Bernal Avenue.

**(a) Views from I-680.** The "views of agricultural lands, open space, native vegetation and hill-sides"<sup>67</sup> that now characterize the stretch of I-680 from Bernal Avenue south to Sunol Boulevard would be replaced by views of development. Instead of an open space vista, a mixed use project will be seen. The project will present large stretches of green (including a golf course, open space, and landscaping for various build uses) but of a different character from the spacious rural image that the view from the freeway now offers. In addition, the future view would be obstructed by sound berms, or a combination of berms and soundwalls at the scale required to mitigate noise impacts. A description of these project features is presented in this chapter at the beginning of Part L (Noise). Safety netting would also be installed for pub-

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<sup>67</sup> *Scenic Highway Plan for Interstate 680 in the City of Pleasanton*, January 11, 1985, p. 1.

lic safety purposes where golf uses align the freeway. Views into and beyond both west and east sides of I-680 would be affected by these elements of the proposed project.

**West Side of I-680.** Under the Cooperative Plan and the Preferred Plan, a landscaped berm/sound-wall combination would extend along the west side of I-680 through most of the site. The berm would be designed with an undulating surface, to approximate the character of a natural land form. It also would be of varying height; where lower than the full height needed for noise mitigation, it would be topped by a soundwall, and the soundwall could include panels of transparent material so that the noise barrier would not be opaque along its entire alignment.

Under Alternative 2, the noise barrier on the west side of I-680 would be a landscaped berm only (without a soundwall), and no provision is made for varying slope, height, or horizontal alignment.

**East Side of I-680.** Under the Cooperative Plan and the Preferred Plan, a landscaped berm/sound-wall combination (with the characteristics described for the noise barrier on the west side of I-680 under these two plans) would be provided set back from the freeway on a meandering alignment between the driving range and golf hole #1. It would extend from approximately the southern end of the Village Commercial area on the north to the local road in the south (where that road passes under I-680). Netting would be installed for safety purposes along the golf course and the driving range.

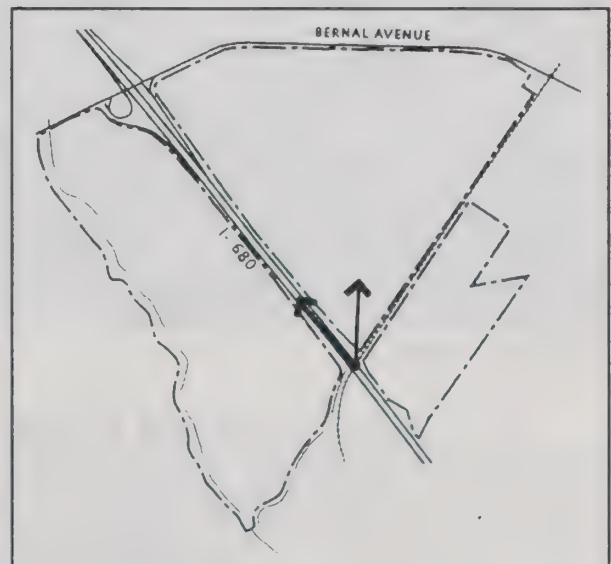
Under Alternative 2, the noise barrier on the east side of I-680 would be a landscaped berm only (without a sound wall), and no provision is made for varying the slope, modulating the surface, or varying the height. It would be aligned in a straight line along the freeway, rather than on the meandering, set back alignment that applies to the Cooperative and Preferred Plans. Alternatively, the berm could be developed as described for the Cooperative and Preferred Plans.

**Visual Simulations of Noise Barriers along I-680.** The noise-mitigation measures described would cut off views into the site; the higher the noise barrier and the closer to the freeway, the greater the lost visibility into the West and Central Parcels. The effect of sound barriers on visibility from I-680 northbound has been analyzed using computer-generated visual simulation techniques. (Appendix G describes the visual simulation methodology.)

Currently, motorists traveling northbound on this segment of I-680 enjoy open landscape views of the site with Mt. Diablo as a scenic backdrop. Figure 36A shows the existing view looking into and beyond the Central Parcel from I-680 northbound at the location indicated in the key map (right).

Figure 36B shows the view with the most simple form of noise barrier, the 16-foot sound berm proposed under Alternative 2 immediately next to I-680.

As the simulation shows, a sound berm in this alignment would confine the foreground view from northbound I-680 to a berm planted with trees, shrubs, and groundcover. Existing middleground landscape and distant panoramic views would be restricted.







Existing View



Visual Simulation

Figure 36

**View toward Central Parcel from I-680 Northbound,  
Existing View and Simulation of Alternative 2 Plan  
with 16-Foot Sound Berms along Freeway**



Some view obstruction would also result from the netting that would be installed as a safety feature along the driving range.

Although the southbound I-680 view of the West Parcel has not been simulated, the same visual impact would occur under Alternative 2 for the west side of I-680. Under the Cooperative Plan and the Preferred Plan, views into the West Parcel would be constricted by a noise barrier with the same geometry as that of Alternative 2, but the provision for a berm/soundwall combination would provide greater variation in the closeup view and the potential to utilize a transparent material for portions of the soundwall would allow for some views into the site.

As in Alternative 2, some view obstruction would also result from the netting that would be installed as a safety feature along the golf course.

The northbound view from I-680 under the Cooperative and Preferred Plan would differ from that under Alternative 2, in part because the noise barrier would be set back from the freeway to meander within the golf course, as described above. Figure 37B simulates the results of a landscaped sound berm in the general alignment proposed for the Cooperative and Preferred Plans. (For comparison purposes Figure 37A repeats the simulation of the existing condition from the same viewpoint.)

The barrier in the set-back position allows for a more extensive “green vista” in the foreground; while it also would intrude on the distant view, the intrusion is reduced and could be still further reduced if landscaping on the top of the berm is limited.

With respect to the shape of the berm, the simulation shown in Figure 37B is a “worst case” condition: the simulation treats the berm as a uniform geometrical shape on a straight-line alignment, whereas the intention of the Cooperative and Preferred Plans is to vary the setback and the slope, to model the sloped surface, and to vary the height of the berm (with a soundwall in place where the berm alone does not reach an adequate height to mitigate noise impacts). Collectively, these features would moderate the visual impacts of the noise mitigation built into the project under the Cooperative and Preferred Plans.

The simulations both reflect a sound berm of a height of 16 feet. It is possible that a higher berm might be needed in order to attain the level of noise mitigation desired. (Chapter 5, Part L (Noise) discusses berms of a height of more than 30 feet.)

In the absence of a sound berm, safety netting would be installed between the golf uses and the freeway along the full length of the golf uses.

Even with the berm set back from the freeway, however, the change in visual access to both near and distant views as well as the change in the character of the view would represent an adverse visual impact under General Plan Conservation and Open Space Policy 5.

<b>Impact N1.</b>	<b>Project development, including barriers to mitigate freeway-related noise, would reduce visibility into and beyond the site and diminish the “green vista” currently available from I-680 northbound and southbound through the site. (Cooperative Plan, Preferred Plan, and Alternative 2)</b>
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Existing View



Visual Simulation

*Figure 37*

**View toward Central Parcel from I-680 Northbound, Existing View and Simulation of Cooperative and Preferred Plans with 16-Foot Sound Berms Set Back from Freeway**



**Valley Avenue Overcrossing.** The Cooperative Plan proposes that Valley Avenue span the Union Pacific railroad track via an overcrossing. Because the bridge structure would have a significant vertical profile (road section plus sidewalk curb and guard rails), and because it would be at about the same elevation above ground as the freeway, it would intrude into the view of the site just at that point where northbound traffic on I-680 enjoys its most extensive view into (and beyond) the site. The new roadway structure and residential development behind it would be highly visible in foreground and middleground views.

From northbound I-680 at the railroad overcrossing, views across the site toward Mt. Diablo would be altered by the dominant horizontal form of the Valley Avenue overcrossing; however, distant views of Mt. Diablo would still be available from this segment of northbound I-680.

Under the Preferred Plan and Alternative 2, the UPRR crossing would be more distant from the freeway (compare Figures 8J and 8K in Chapter 4) and impact on the freeway view corridor would be greatly diminished. However, if the crossing in the Preferred Plan alignment were to be an overcrossing, that would introduce an out-of-scale structure into a residential neighborhood and result in an adverse visual impact that would affect both the surrounding area and views into the project from other areas.

**Impact N2.**     **The Valley Avenue overcrossing of the UPRR tracks in the Cooperative Plan would introduce a large obstruction into the view visible from a key point northbound along the scenic I-680 corridor; under the Preferred Plan, it would introduce an out-of-scale infrastructure element into a small-scale residential environment.**

**(b) Views from Bernal Avenue.** Visibility into and beyond the Central Parcel from along Bernal Avenue could potentially be obstructed by buildings. Obstruction would vary along the street frontage according to the location and height of buildings, the setback distance, and the amount of space between buildings. If setbacks are minimal and the wide dimension of buildings is oriented toward the road, the visual impairment will be greatest.

The Cooperative Plan proposes commercial use along Bernal Avenue except at the eastern end of the Central Parcel, a site proposed for a community park; approximately two-thirds of the Bernal Avenue frontage would be occupied by buildings. The Preferred Plan sites a portion of the golf course along Bernal Avenue; since the community park is at the northeast corner of the Central Parcel as it is in the Cooperative Plan, less than half of the Bernal Avenue frontage under the Preferred Plan would be occupied by buildings. Under Alternative 2, commercial and residential buildings would occupy the central area of Bernal Avenue the length of the Central Parcel, and portions of the frontage in other areas; overall, approximately half of the frontage would be occupied by buildings.

Where open space uses are proposed along Bernal Avenue – the community park under the Cooperative Plan, the Preferred Plan, and Alternative 2 and a portion of the golf course under the Preferred Plan – fencing of active recreation areas may be required. Along the golf course under the Preferred Plan, fencing would be required both to control access to the course and to provide for public safety.

Finally, planting with large canopy shade trees along Bernal Avenue would obscure distant vistas of the hills south of Pleasanton.

In summary, where the Bernal frontage is occupied by buildings, the buildings pose the potential to obscure views; where the Bernal frontage is occupied by open space, fencing may impair views.



**Impact N3. Development structures and fencing would reduce visibility into and beyond the site and diminish the availability of distant views from Bernal Avenue. (Cooperative Plan, Preferred Plan, and Alternative 2)**

**(2) Site Development Could Affect the Visual Quality of the Knoll.** Under the Cooperative Plan, substantial grading of the knoll is proposed in order to create level sites of adequate size for the school northeast of the knoll and for playfields northwest of the knoll; the soils removed would be utilized as fill elsewhere on the site. Table 53 in Chapter 5, Part Q (Geology, Soils, and Seismic Safety) indicates that over 300,000 cubic yards would be removed from the knoll, the largest single area of “cut” proposed under the Cooperative Plan. The trees on the knoll tentatively identified as heritage trees (Appendix F) are on the slope that would be subject to major cuts. These actions, as well as the location of the school/playfield complex at the foot of the remaining hill, would reduce the singularity of this landscape feature and diminish its natural appearance from the northwest, north, and northeast.

The development plans under the Preferred Plan and Alternative 2 do not propose substantial grading of the knoll; the knoll would be subject only to whatever minor earth movement would be needed to establish its use as public open space or park.

**Impact N4. Proposed grading of the knoll would adversely affect its visual quality (Cooperative Plan).**

**(3) The Project Does Not Propose Change in the Arroyo de la Laguna that Would Affect Its Visual Quality.** The proposed development plans would accommodate some flood flow in the golf course under certain circumstances (see Option 5, Chapter 4), but any major flood control improvement in the Arroyo would be a project of the flood control agency and are not part of this project.

**(4) Site Development Would Result in Loss of Major Trees.** In addition to the loss of major trees on the knoll, the Cooperative Plan proposes the removal of the cluster of trees adjacent to the former farmstead on the West Parcel, the grove of willows on the East Parcel, and scattered trees elsewhere on the site. The recontouring of site topography would be responsible for most of the tree loss; street improvements along Bernal Avenue would result in some additional losses.

Under the Preferred Plan, tree loss affecting the site’s existing visual quality would be less than that under the Cooperative Plan because there would be no grading of the knoll and the willow grove would be retained. However, loss of other significant trees would be expected in the mass grading for site development, in the filling of a portion of the finger tributary (the dry channel of the Arroyo, half of which would be filled under the Preferred Plan), and in the improvement of Bernal Avenue.

**Impact N5. A significant number of major trees on the site would be lost as a result of site preparation and Bernal Avenue improvements. (Cooperative Plan, Preferred Plan, and Alternative 2)**

**(5) The Site Plan Has the Potential to Recognize the “Gateway” Function of the Site.** The principal contribution to the “gateway” effect of Bernal Avenue (between I-680 and the Pleasanton Civic Center) will lie in the redesign and reconstruction of the street itself. Adjoining land uses can contribute to

the desired effect by means of complementary landscaping, suitable setbacks, and building scale, design, and materials that are not obtrusive. Assuring this result would be one function of detailed site plan review as individual elements of the plan proceed. This condition applies to all alternatives addressed in this EIR.

***(6) Proposed Development Will be a Source of Night Lighting.*** Compared with the site in its undeveloped condition, development under any of the plan alternatives would significantly increase the amount of nighttime illumination. Some of the sources will be street lights, vehicle headlamps, night lighting for recreational uses (possibly, the community park and the golf driving range), and lighting of outdoor parking areas, such as at the Village Center. No specific sources of glare have been identified.

**Impact N6. Development would significantly increase night lighting at the project site.**

***(7) Site Development is Unlikely to Have a Substantial, Demonstrable Negative Aesthetic Effect.*** The kinds of uses proposed are typical of suburban communities. No use normally categorized as noxious is anticipated. The specific plan is expected to include detailed design guidelines for buildings, site planning, street sections, and landscape edge treatments, and all site and building plans would be subject to design review. With these provisions in place, the visual quality of offsite areas would be adequately protected.

### **c. Impacts of Alternative 3**

The impacts of Alternative 3 are discussed in the County EIR, Chapter 4.11.

## **3. Mitigation Measures**

The following mitigation measures are based on the foregoing discussion.

**Impact N1.** Project development, including barriers to mitigate freeway-related noise, would reduce visibility into and beyond the site and diminish the “green vista” currently available from I-680 northbound and southbound through the site. (Cooperative Plan, Preferred Plan, and Alternative 2)

**Measure N1a.** Avoid placement of opaque noise barriers along I-680.

If noise barriers are provided along I-680, then:

**Measure N1b.** Plan for noise mitigation in a manner that takes account of the visual consequences of noise barriers on views of the site from the outside and on views from within the project.

Among the strategies that may be appropriate:

- (1) Set any sound berms or berm/soundwall combinations back from the I-680 alignment.
- (2) Design berms to present as natural an appearance as possible.

Berms can be given a more natural appearance by incorporating variation in height,



setback, surface form, and landscaping.

- (3) Alternate berms with sound walls (potentially including some transparent materials) to vary the form of the sound barrier and to reduce the adverse visual impacts of sound walls.
- (4) Prepare a planting plan for the set-back sound berm that avoids placing view-impeding vegetation at the top of the berm.

If sound berms are used, and if distant views through and beyond the site would still be available (which depends on the placement and height of the berm), avoid landscaping that would impair those views.

Implementation of Measures N1a and N1b but not to a less-than-significant level; an adverse visual impact would remain.

**Impact N2.** The Valley Avenue overcrossing of the UPRR tracks in the Cooperative Plan would introduce a large obstruction into the view visible from a key point northbound along the scenic I-680 corridor; under the Preferred Plan, it would introduce an out-of-scale infrastructure element into a small-scale residential environment.

**Measure N2.** The Valley Avenue crossing of the Union Pacific railroad should be constructed as an undercrossing to avoid impairing views from I-680 or introducing an out-of-scale bridge structure into a residential development context.

- (1) For the Cooperative Plan, choose the Valley Avenue alignment shown for the Preferred Plan (because a rail undercrossing next to the freeway is considered physically infeasible).
- (2) Implement the Valley Avenue/UPRR grade separation as an undercrossing to avoid introducing a visually-prominent infrastructure element into a residential area.

Implementation of Measure N2 would reduce Impact N2 to a less-than-significant level.

**Impact N3.** Development structures and fencing would reduce visibility into and beyond the site and diminish the availability of distant views from Bernal Avenue. (Cooperative Plan and Preferred Plan)

**Measure N3a.** Configure land use on the site so as to provide substantial open space frontage along Bernal Avenue.

Site plans for the Preferred Plan and Alternative 2 respond more closely to this direction than does the site plan for the Cooperative Plan. Under Alternative 2, a noise barrier along the area of residential use would impose an obstruction to views into the site.

**Measure N3b.** Site of buildings along the Bernal Avenue right-of-way in a manner that allows views into and beyond the site.

**Measure N3c.** Where security fencing is needed along Bernal Avenue (primarily along the golf course, to control access, and along active recreational areas, for public safety), utilize a type of fencing that allows for views into and through the site.

Implementation of Measures N3a through N3c would reduce Impact N3 to a less-than-significant level for the Preferred Plan; significant impacts would remain for the Cooperative Plan.

**Impact N4.** Proposed grading of the knoll would adversely affect its visual quality (Cooperative Plan).

**Measure N4.** Redesign site plan to avoid major grading on the knoll.

Only open space use (including park) is appropriate for that portion of the knoll visible from the site or from I-680.

Implementation of Measure N4 would reduce Impact N4 to a less-than-significant level.

**Impact N5.** A significant number of major trees on the site would be lost as a result of site grading and improvements to Bernal Avenue. (Cooperative Plan and Preferred Plan)

**Measure N5a.** Development shall preserve as a visual resource any heritage trees on the site, the riparian vegetation along the Arroyo and in the finger tributary, the trees at the site of the old farmstead on the West Parcel, and the trees on the knoll and in the willow grove on the East Parcel.

**Measure N5b.** Reconstruction of Bernal Avenue shall maintain significant existing street trees where possible. If any trees must be removed to accommodate reconstruction of the street, they shall be replaced according to a plan for beautification of Bernal Avenue consistent with the Community Character Element of the Pleasanton General Plan.

**Measure N5c.** The site should be landscaped in a manner that replaces the tree features lost as a consequence of development.

Implementation of Measure N5 would reduce impact N5 to a less-than-significant level.

**Impact N6.** Development would significantly increase night lighting at the project site.

**Measure N6.** A section on lighting design, including specifications to avoid excessive light or glare, shall be included in the final design guidelines for the specific plan.

Implementation of Measure N6 would reduce impact N6 to a less-than-significant level.



#### 4. Summary Comparison of Impacts and Mitigated Impacts: Visual Impacts

	Cooperative Plan	Preferred Plan (Alternative 1)
<b>Impact N1.</b> Project development, including barriers to mitigate freeway-related noise, would reduce visibility into and beyond the site and diminish the "green vista" currently available from I-680 northbound and southbound through the site.	S/S	S/S
<b>Impact N2.</b> The Valley Avenue overcrossing of the UPRR tracks in the Cooperative Plan would introduce a large obstruction into the view visible from a key point northbound along the scenic I-680 corridor; under the Preferred Plan, it would introduce an out-of-scale infrastructure element into a small-scale residential environment.	S/LS	S/LS
<b>Impact N3.</b> Development structures and fencing would reduce visibility into and beyond the site and diminish the availability of distant views from Bernal Avenue.	S/S	S/LS
<b>Impact N4.</b> Proposed grading of the knoll would adversely affect its visual quality.	S/LS	LS/*
<b>Impact N5.</b> A significant number of major trees on the site would be lost as a result of site grading and improvements to Bernal Avenue.	S/LS	S/LS
<b>Impact N6.</b> Development would significantly increase night lighting at the project site.	S/LS	S/LS

Key: \*/\*: significance before mitigation/significance after mitigation.

S: significant

(C): contributes to cumulative impact

LS: less than significant

n.a.: impact does not apply to this alternative

\* no mitigation required

ND: not determinable

† Less than significant before mitigation, but contributes to cumulatively significant impact.

NM: no mitigation possible (beyond policies, programs, and other regulations already in place).

## O. BIOLOGY

### 1. Setting

This section was prepared in its original form by The Planning Collaborative for the County EIR with contributions from Zentner and Zentner. It has been adapted by Mundie & Associates with contributions from Sycamore Environmental Consultants.

#### a. Introduction and Methodology

The biological resources occurring in the project area were identified through a review of available information on resources in the project vicinity, and through a series of field surveys conducted over the past nine years.

(1) Literature Review. Literature review provided information on general biological resources and on the distribution and habitat requirements of plant and animal species ("taxa") of special status which have been reported from or are suspected to occur in the project vicinity. Record searches were conducted by the California Natural Diversity Data Base (CNDDB) of the California Department of Fish and Game (CDFG) before each field survey effort, providing information on the known distribution of special-status plant and animal taxa and sensitive natural communities in Pleasanton and the surrounding eastern Alameda County area. The latest of these record searches was conducted in January 1995, providing the most recent information available from the CNDDB.<sup>68</sup>

(2) Field Surveys. Field surveys of the project area were conducted in June 1986, June 1989, January 1995, and October 1996 to determine the site's existing vegetation, wildlife species which may occur on or frequent the site vicinity, and presence or potential for populations of special-status taxa. The surveys also established a preliminary understanding of the extent of jurisdictional wetlands and "other waters of the U.S." (discussed in Subpart d, below.) The survey effort in 1986 involved a detailed vegetation analysis and survey for populations of special-status plant taxa.<sup>69</sup> The survey effort in 1989 was conducted as part of an initial phase of the continuing planning process for the project area, and served to identify vegetative cover, and the potential for occurrence of special-status taxa, as well as important planning considerations to protect sensitive resources.<sup>70</sup> The field effort in 1995 served to update information from earlier surveys, confirming mapping of vegetative cover, expanding the assessment of wildlife resources and the potential for occurrence of special-status animal taxa, and providing a preliminary assessment and mapping of wetland resources in the project area.<sup>71</sup> The field survey in 1996 included reconnaissance and evaluation of potential wetland areas and consideration of habitat values.<sup>72</sup>

An additional field survey was completed in March 1997 for the purpose of identifying those existing trees on the property that may be considered "heritage trees" according to City of Pleasanton criteria. The results of the survey are presented in Appendix F to this EIR. For purposes of this survey, heritage trees

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<sup>68</sup> *Natural Diversity Data Base*, California Department of Fish and Game, 1995, record search of the Dublin and Livermore 7.5' Quadrangles, January 24, 1995.

<sup>69</sup> *Preliminary Survey Results: Vegetative Analysis of Arroyo de la Laguna and Adjacent Lands*, Barrie D. Coate and Stewart Winchester, July 1986 (cited below as *Vegetative Analysis*, Coate and Winchester, 1986).

<sup>70</sup> *Baseline Environmental Consulting*, 1989.

<sup>71</sup> *Section 404 Jurisdictional Delineation*, Zentner and Zentner, February 2, 1995.

<sup>72</sup> *Sycamore Environmental Consultants, Inc.*, October 1996.



have been defined according to the City of Pleasanton Municipal Code, Section 17.16.006 (Tree Preservation Ordinance), as any tree which meets the following criteria:

1. any single-trunked tree with a circumference of 55 inches or more, measured 4.5 feet above ground level, or
2. any multi-trunked tree of which the two largest trunks have a circumference of more than 55 inches or more, measured 4.5 feet above ground level, or
3. any tree 35 feet or more in height.

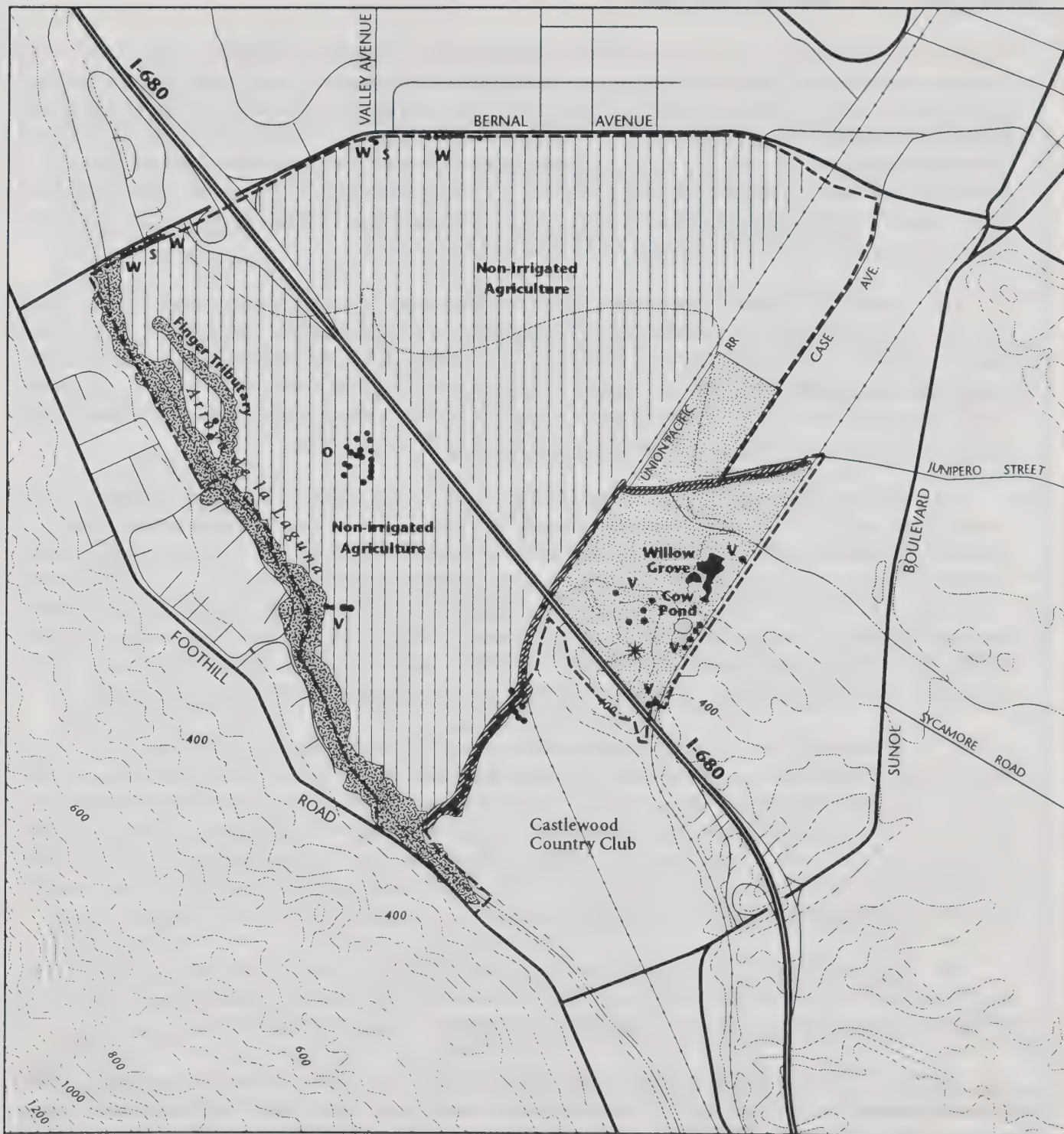
**b. Existing Conditions**

**(1) Vegetation and Habitats.** Vegetation in the project area consists primarily of cultivated animal feed crops (West and Central Parcels) and non-native grassland (East Parcel). Several trees of significant size occur in the annual grassland on the fringes of the agricultural fields. Well-developed riparian woodland vegetation occurs along the Arroyo de la Laguna at the western border of the project area. Freshwater marsh occurs in the smaller, unnamed tributary stream along the southeastern edge of the project area (drainage channel B-2-1 in Figure 12, p. 72). Vegetative cover and important biotic features in the project area are depicted in Figure 38 and described below.





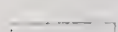
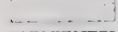
***(a) Arable Land and Non-native Grassland.*** With the exception of the riparian corridor, most of the project area has been subject to cultivation or grazing use in the past. Native vegetation in these areas has been eliminated. Cultivated crops have included animal feed crops (such as alfalfa and hay) in areas under cultivation; annual grasses and forbs have been introduced in grazing areas, on fallow land, and in the margins of the agricultural fields. Common annual grasses and forbs of the grassland include wild oat, filaree, plantain, wild radish, black mustard, and yellow star thistle.

***(b) Oak Savannah.*** Several large valley oak trees grow in the grassland in the vicinity of the knoll at the south end of the East Parcel, along the transportation corridor, and at other scattered locations. Figure 38 shows the location of individual valley oaks outside the Arroyo de la Laguna riparian corridor. (See also the map in Appendix F showing the locations of trees tentatively identified as meeting the specifications of heritage trees.) The oaks vary in size from saplings and relatively young trees with trunks under 12 inches (measured at 4.5 feet above grade) to an estimated 50 inches in diameter. The mature oaks are remnants of the oak savanna vegetation type which once occurred throughout valley bottoms in the project vicinity; their condition varies.

***(c) Riparian Forest.*** Vegetation along the Arroyo de la Laguna forms a well-developed riparian forest composed of trees, shrubs, vines, and groundcover species. The mature trees form a near continuous canopy of valley oak, Fremont cottonwood, willow, California black walnut, California buckeye, box elder, sycamore, elderberry, and California bay laurel. Understory vegetation varies in density and composition, and includes western clematis, wild grape, toyon, blackberry, California wild rose, dogwood, poison oak, snowberry, sticky monkey flower, coyote brush, California sagebrush, and mugwort. Riparian vegetation along the Arroyo de la Laguna forms two corridors in the northwestern portion of the project area, following both the existing channel of the creek and a former channel (now dry). The former channel extends a distance of approximately 1,200 feet from the Arroyo, forming a narrow band or “finger” of dense trees and shrubs surrounded by agricultural fields. Some of the mature trees in the dry channel show signs of stress, probably due to the apparent lack of surface flows in the finger tributary.



Source: *Environmental Baseline Report, 1988* (full citation in Chapter 9), p. 62.

-  Stream/Drainage Channel
-  Riparian or Aquatic Vegetation
-  Significant Trees  
(S = Sycamore, V = Valley Oak,  
W = Walnut, O = Ornamental)
-  Grassland
-  Arroyo de la Laguna Riparian Corridor
-  Knoll Area

0 500 1000 2000  
FEET



Figure 38  
Vegetation and Habitat



The Arroyo de la Laguna riparian corridor is a biotic resource of regional significance. The dense forest cover provides valuable habitat for aquatic and terrestrial wildlife species. The riparian forest meets the habitat descriptions of Holland (1986) as Great Valley Riparian Forest, with characteristics of both the Mixed and Valley Oak natural communities. The Great Valley Riparian Forest habitat types remaining in California are considered sensitive natural communities because of their loss throughout the state as a consequence of flood control improvements and clearing for agricultural production and urban expansion. Flood control improvements along the Arroyo upstream from the Bernal Avenue crossing have eliminated much of the riparian forest cover through the Livermore-Amador Valley.

**(d) *Freshwater Marsh.*** Freshwater marsh vegetation occurs in and along the Arroyo de la Laguna channel and in the drainage channel along the southeastern boundary of the project area. Emergent vegetation along the Arroyo and tributary drainage includes cattail, toad rush, soft rush, bulrush, spikerush, common horsetail, water lentil, and watercress. Due to the lack of surface water during the critical summer months, emergent vegetation is generally absent along the smaller drainage ditches that parallel the UPRR tracks and cross the northeastern and southeastern portions of the project area.

**(e) *Willow Stand and Thicket.*** A stand of willow occurs in the level pasture in the southeastern corner of the project area, occupying approximately 2.4 acres. Due to intense browsing by cattle, the willows have been trained into upright trees with a height of up to 30 feet. Several Fremont cottonwood are scattered throughout the willow thicket. A few willows also grow near the outlet to a culvert under the abandoned railroad right-of-way in the County transportation corridor to the northeast of the large stand. The smaller thicket is supported by flows in a small creek, which is mapped as an intermittent blue-line stream on the USGS topographic map of the area. The small creek (Area D in Figure 39) continues across the pastureland in the project area as a man-made ditch with no emergent or wetland indicator species.

**(f) *Ornamental Landscaping.*** Trees have been planted as landscaping in the vicinity of the former farmhouse on the West Parcel and as street trees along the Bernal Avenue frontage of the project area. The trees vary in condition and size (some qualify as “heritage” trees, 55 inches in circumference or 35 feet in height). Most of the trees in the vicinity of the former residence are non-native and show signs of stress due to the lack of irrigation. Trees along the northern property boundary adjacent to Bernal Avenue are primarily black walnut, with a few sycamore trees. Both are native species commonly used in landscaping; because of its drought tolerance, the black walnut is used as a root stock in grafting with English walnut.

**(g) *Heritage Trees.*** Heritage trees were found in four primary areas: (1) adjacent to the Arroyo de la Laguna corridor, (2) associated with the old farmstead in the West Parcel, (3) along Bernal Avenue, and (4) in the vicinity of the knoll on the East Parcel. These trees are mapped in Appendix F.

**(2) *Wildlife.*** The agricultural, grassland, and riparian habitats provide for a diverse assemblage of resident and migrant wildlife species, but continual disturbance from agricultural activities and intensive grazing limits the habitat value of the project area. Animal species expected to use and/or observed on the site habitat are identified in Table 47.

Past annual disking of most of the croplands and intensive grazing of the pasturelands has reduced the habitat value of the site by eliminating cover, forage, and possible nesting locations. Similarly, periodic dredging of the main tributary drainage along the southern boundary and the smaller drainage ditches has prevented the establishment of dense emergent and riparian vegetation along these features. The riparian corridor along the Arroyo provides the only remaining native habitat of high value: in the reach of the Arroyo that passes through the site, channel modifications and human disturbance have been limited.

**Table 47**  
**Special-status Animal Taxa: Potential Occurrence in Project Area**

<b>Taxa Name</b>	<b>Status Federal/State</b>	<b>Habitat Characteristics</b>	<b>Potential for Occurrence within Project Area</b>
<b>Invertebrates</b>			
<i>Branchinecta longiantenna</i> Longhorn fairy shrimp	PE/-	Grassland vernal ponds	suitable habitat absent
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	PE/-	Vernal pools	suitable habitat absent
<i>Hydrocharis rickseckeri</i> Ricksecker's water scavenger beetle	C2/-	Ponds, streams, marshes, lakes	marginal habitat present but occurrence unlikely due to routine disturbance
<i>Hygrotus curvipes</i> Curved-foot hygrotus diving beetle	C2/-	Drainages, seeps, wet areas	marginal habitat present but occurrence unlikely due to routine disturbance
<i>Ischnura gemina</i> San Francisco forktail damselfly	C3C/-	Drainages, seeps, wet areas	marginal habitat present but occurrence unlikely due to routine disturbance
<i>Linderiella occidentalis</i> California linderiella	PE/-	Vernal pools	suitable habitat absent
<b>Amphibians/Reptiles</b>			
<i>Ambystoma tigrinum californiense</i> California tiger salamander	C2/CSC	Grassland and open woodlands with temporary or permanent water	suitable upland retreat habitat absent
<i>Clemmys marmorata</i> Western pond turtle	C3C/CSC	Ponds, marshes, rivers, and streams	suitable habitat present along Arroyo, but not detected during surveys
<i>Masticophis lateralis euryxanthus</i> Alameda whipsnake	C2/ST	Scrub/chaparral habitat, and adjacent grasslands, open woodlands, and riparian corridors	suitable habitat absent
<i>Rana aurora draytoni</i> California red-legged frog	C1/CSC	Permanent ponds, pools, and streams	suitable habitat present along Arroyo, but not detected during surveys
<i>Scaphiopus hammondi hammondi</i> Western spadefoot toad	C2/CSC	Permanent wet areas and adjacent grasslands	suitable habitat absent
<b>Birds</b>			
<i>Agelaius Tricolor</i> Tricolored blackbird	C2/CSC	Waterways and adjacent grassland and agricultural fields	suitable breeding habitat absent
<i>Aquila chrysaetos</i> Golden eagle	-/CSC, CP	Open mountains, foothills, and canyons	suitable nesting habitat absent
<i>Athene cunicularia</i> Burrowing owl	-/CSC	Open grassland and fields, farms, and ruderal areas	suitable foraging habitat present but nesting habitat absent
<i>Buteo regalis</i> Ferruginous hawk	C2/-	Forages in variety of habitats, but not known to breed in California	suitable foraging habitat present for occasional use by wintering individuals but essential habitat absent
<i>Circus cuneus</i> Northern harrier	-/CSC	Marshes, fields, and grassland	suitable foraging habitat present but nests absent
<i>Dendroica petechia</i> Yellow warbler	-/CSC	Riparian habitat	suitable foraging and breeding habitat along Arroyo
<i>Elanus caeruleus</i> Black-shouldered kite	-/CP	Open foothills, marshes, and grassland	suitable foraging habitat present but nesting habitat absent
<i>Eremophila alpestris actia</i> California horned lark	C2/-	Open habitat with sparse cover	suitable foraging habitat present but nesting habitat absent



Table 47 (continued)

Taxa Name	Status Federal/State	Habitat Characteristics	Potential for Occurrence within Project Area
<b>Birds (cont'd)</b>			
<i>Falco columbarius</i> Merlin	–/CSC	Forages in variety of habitats, but not known to breed in California	suitable foraging habitat present for occasional use by wintering individuals but essential habitat absent
<i>Falco mexicanus</i> Prairie falcon	–/CSC	Canyons, mountains, open grassland	suitable foraging habitat present but nesting habitat absent
<i>Falco peregrinus</i> Peregrine falcon	FE/SE, CP	Canyons, mountains, open grassland	suitable foraging habitat present but nesting habitat absent
<i>Haliaeetus leucocephalus</i> Bald eagle	FE/SE, CP	Coast, lakes, and rivers	suitable habitat absent
<i>Lanius ludovicianus</i> Loggerhead strike	C2/–	Open habitat with scattered trees, shrubs, and other perches	suitable foraging habitat present but no nests located during surveys
<b>Mammals</b>			
<i>Antrozous pallidus</i> Pallid bat	–/CSC	Roosts in caves, crevices, unused structures	maternity roosts absent, not detected during surveys
<i>Eumops perotis californicus</i> California mastiff bat	C2/CSC	Caves and crevices in arid areas with high cliffs	roosting habitat absent, not detected during surveys
<i>Plecotus townsendi townsendi</i> Townsend western big-eared bat	C2/CSC	Caves, mines, and abandoned buildings	roosting habitat absent, not detected during surveys
<i>Taxidea taxus</i> American badger	–/CSC	Grassland, oak savanna, and woodland	suitable foraging habitat but no signs of foraging activity or dens detected during surveys
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	FE/ST	Alkali sink, saltbrush scrub, grassland, and oak savanna	suitable habitat absent

**STATUS DESIGNATIONS:**

**Federal:**

- FE = Listed as Endangered under the Federal Endangered Species Act
- FT = Listed as Threatened under the Federal Endangered Species Act
- PE = Proposed candidate for federal listing as Endangered.
- C1 = A candidate species under review for federal listing. Category 1 includes taxa for which the USFWS has sufficient biological information to support a proposal to list an endangered or threatened.
- C2 = A candidate species under review for federal listing. Category 2 includes species for which the USFWS presently has some biological information indicating that “proposing to list them as endangered or threatened species is possibly appropriate,” but for which further biological research and field study is usually needed to determine biological vulnerability and threats. Category 2 species are not necessarily less rare or less threatened than Category 1 species. The distinction relates to the amount of data available and is therefore administrative rather than biological.
- C3C = No longer a candidate species for federal listing. “Category 3” species are too common to be eligible for federal listing, but may still qualify for protection under state law.
- R1 = Recommended for Category 1 candidate status.
- R2 = Recommended for Category 2 candidate status.

**State:**

- SE = Listed as Endangered under the California Endangered Species Act.
- ST = Listed as Threatened under the California Endangered Species Act.
- CP = California fully protected species; individual may not be possessed or taken at any time.
- CSC = Considered a species of special concern by the California Department of Fish and Game; taxa have no formal legal protection but nest sites and communal roosts are generally recognized as significant biotic features.

Although agricultural practices and intensive grazing have tended to eliminate important cover for wildlife throughout most of the project area, the location of the site and its restricted access have permitted utilization by smaller mammals and birds as well as larger predatory species. Insect and rodent populations fluctuate with the seasons as grassland cover becomes re-established in early summer. When prey population levels are high, they provide an abundant food source for mammalian predators such as long-tailed weasel, raccoon, and coyote, as well as avian predators such as American kestrel, red-tailed hawk, barn owl, great horned owl, common egret, and great blue heron.

Areas of established grassland provide protective cover and permit recolonization of former agricultural fields. Species commonly associated with grasslands include mourning dove, American goldfinch, western meadowlark, ring-necked pheasant, California vole, striped skunk, black-tailed jackrabbit, gopher snake, and western fence lizard. The lack of protective cover in the open grasslands magnifies the importance of isolated trees and the dense riparian forest, which serve as nesting, denning, and retreat areas for a variety of birds and mammals.

The Arroyo de la Laguna corridor is a feature of regional importance to wildlife, providing a source of drinking water, protective cover and nesting substrate, and serving as a movement corridor. The creek channel is used as a movement corridor for larger wildlife species such as grey fox, black-tailed deer, striped skunk, raccoon, and opossum. The creek supports aquatic amphibians, reptiles, and resident and migratory fish species. Areas with emergent vegetation and ponding are particularly attractive features to waterfowl and colonial nesting birds such as mallard duck, herons, egrets, and red-winged blackbird. Dense trees and shrubs provide important nesting and foraging habitat for numerous species of birds such as warbling vireo, ruby-crowned kinglet, dark-eyed junco, and California quail. The large crops of acorns from the scattered oaks and trees in the riparian forest provide an important source of food for numerous woodpeckers, jays, squirrels, and black-tailed deer in the fall.

A red-tailed hawk nest was observed in a large valley oak tree along the eastern edge of the riparian forest, as indicated in Figure 38. An adult red-tailed hawk was perched near the nest and displayed threatening behavior when the nest was approached during the January 1995 survey, indicating that the nest is still in active use. With the exception of the red-tailed hawk nest, evidence of essential nesting and denning habitat for other raptors and larger mammals was not observed in the project area. No other raptor nests were observed in the trees, and no suitable nest locations for burrowing owl, which tends to occupy burrows of ground squirrel and other larger rodents, were observed during the survey due to the absence of ground squirrels.

The established trees planted as landscaping provide perching, roosting, and nesting substrate for birds, many of which are typical of urbanized areas. These include house sparrow, house finch, American robin, and European starling. The habitat value of these trees is considered low, however, due to their origin as landscape plantings, proximity to the active Bernal Avenue roadway corridor, and lack of use by sensitive bird species for nesting or roosting.



### **c. Jurisdiction and Requirements of Other Agencies**

**(1) Special Status Species** Special-status taxa are plants and animals that are legally protected under the federal and/or state Endangered Species Acts<sup>73</sup> or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. Species with legal protection under FESA and/or CESA often represent major constraints to development, particularly when they are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a “take”<sup>74</sup> of these species.

A record search conducted by the CNDDB<sup>75</sup>, together with other relevant information (i.e., the California Native Plant Society’s *Inventory of Rare and Endangered Vascular Plants of California*<sup>76</sup>, the Notice of Review for federally-listed and candidate animals<sup>77</sup>, the CDFG’s list of special animals and plants<sup>78</sup>, the

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<sup>73</sup> The Federal Endangered Species Act of 1973 (FESA) declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal taxa. The California Endangered Species Act of 1984 (CESA) parallels the policies of FESA and pertains to native California taxa.

<sup>74</sup> “Take” as defined by FESA means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct” concerning a threatened or endangered species. (U.S.C. Section 1532(19) “Harm” is further defined by the Secretary of the Interior as an act that “may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. (50 CFR Section 17.3 (1994)) The case of *Palila vs. Hawaii Department of Land and Natural Resources* 852 F.2d 1106 (9th Cir., 1988) (*Palila II*) provided a legal basis for concluding that habitat destruction which prevents the recovery of a species by affecting essential behavioral patterns is construed as “harm” and, therefore, invokes a “take” under FESA. In *Babbitt v. Sweet Home Chapter of Communities for a Greater Oregon*, 115 S.Ct. 2407 (1995), the U.S. Supreme Court held that the Secretary of the Interior’s regulatory definition of “harm” was reasonable, and, therefore, valid. The Court also appeared to clarify *Palila II* by identifying two elements needed to prove harm: (1) a direct foreseeable connection between an action or omission and harm to a species and (2) actual harm (injury or death) to a protected species. A determination of whether harm occurred must be addressed on a case-by-case basis. The CDFG also considers the loss of listed species habitat as “take,” although this policy lacks authority and case law support under CESA. In 78 Ops. Cal. Atty. Gen. 137 (1995), the State Attorney General opined that a “take” under CESA does not include indirect harm to a protected species from habitat modification.

Two sections of FESA contain provisions which allow or permit “incidental take.” Section 10(a) provides a method by which a state or private action which may result in “take” may be permitted. The applicant must provide the USFWS with an acceptable conservation plan and publish notification for a permit in the Federal Register. Section 7 pertains to a federal agency which proposes to conduct an action which may result in “take,” requiring consultation with USFWS and possible issuance of a jeopardy decision. Under the CESA, “take” can be permitted under Section 2081 of the Fish and Game Code. The applicant must enter into a habitat management agreement with the CDFG, which defines the permitted activities and provides adequate mitigation. But, see *San Bernardino Valley Audubon v. City of Moreno Valley*, 44 Cal. App. 4th 593 (1996).

<sup>75</sup> *Natural Diversity Data Base*, California Department of Fish and Game, 1995, record search of the Dublin and Livermore 7.5’ Quadrangles, January 24, 1995.

<sup>76</sup> *Inventory of Rare and Endangered Vascular Plants of California* (5th Edition), California Native Plant Society, 1994.

<sup>77</sup> *Endangered and Threatened Wildlife and Plants; Animal Notice of Review*, U.S. Fish and Wildlife Service, 1994, Federal Register 50 CFR Part 17.

detailed plant survey conducted for the project area in 1986<sup>79</sup>, and other information sources), indicates that historical occurrences of several plant and animal taxa with special status have been recorded from or are suspected from the Pleasanton area of Alameda County. Special-status taxa include:

- Officially designated (rare, threatened, or endangered) and candidate species for listing by the CDFG;
- Officially designated (threatened or endangered) and candidate species for listing by the USFWS;
- Taxa considered to be rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act (CEQA) Guidelines<sup>80</sup>, such as the plant taxa identified on lists 1A, 1B, and 2 in the Inventory of Rare and Endangered Vascular Plants of California.
- Possibly other taxa which are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on lists 3 and 4 in the California Native Plant Society (CNPS) *Inventory* or identified as animal "Species of Special Concern"<sup>81</sup> by the CDFG.

According to records maintained by the CNDDB, no special-status plant or animal taxa have been reported from the project area or immediate vicinity. Species of concern that have been reported by the CNDDB from the surrounding Livermore and Pleasanton area include California tiger salamander (*Ambystoma californiense*), burrowing owl (*Athene cunicularia*), San Joaquin kit fox (*Vulpes macrotis mutica*), tricolor blackbird (*Agelaius tricolor*), San Joaquin saltbush (*Atriplex joaquiniana*), Congdon's tarplant (*Hemizonia parryi* ssp. *congdonii*), and palmate-bracted bird's-beak (*Cordylanthus palmatus*). Suitable habitat for numerous other special-status taxa is present in the project vicinity but occurrence information may not be recorded with the CNDDB due to the lack of detailed survey work to detect existing populations, or the fact that taxa of concern without legal or candidate status tend to not be closely monitored by the Data Base. Detailed field surveys are generally necessary to provide a conclusive determination on presence or absence of special-status taxa. The following provides a discussion of plant and animal taxa of concern and conclusions regarding their potential for occurrence in the project area.

(a) *Plant Taxa of Concern*. Based on recorded geographic range and presence of suitable habitat, over 30 plant taxa with special status may have historically occurred in the project area. Extensive disturbance from agricultural production, flood control improvements, and intensive grazing have eliminated suitable habitat for special-status plant populations in all but the riparian corridor along the Arroyo. The Arroyo riparian woodland is an important biotic resource: "over half of all common and uncommon woody species listed as characteristic of climax riparian forests are found in the Arroyo de la Laguna site."<sup>82</sup>

No special-status plant taxa were detected during the systematic survey conducted in June 1986 and no taxa of concern are believed to occur in the project area. The survey report states, "Those species found in abundance are adventive: those encouraged by disturbed soils and surface water (crop irrigation) and

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<sup>78</sup> *Natural Diversity Data Base, Special Animals and Special Plants*, California Department of Fish and Game, (both) 1995.

<sup>79</sup> *Vegetative Analysis*, Coate and Winchester, 1986.

<sup>80</sup> *California Environmental Quality Act and Guidelines*, State of California, 1992.

<sup>81</sup> Species of Special Concern have no legal protective status under the state Endangered Species Act but are of concern to the CDFG because of severe decline in breeding populations in California.

<sup>82</sup> *Vegetative Analysis*, Coate and Winchester, 1986.



possessing means of copious seed production (annuals). . . . In summary, aggressive alien species dominate the cultivated land tracts to the detriment of potentially rare native species.”<sup>83</sup>

Valley oak (*Quercus lobata*) occurs in the remnant oak savanna and riparian forest along the Arroyo, and until 1994 this species was included on List 4 of the CNPS *Inventory*. List 4 plants are considered to be of limited distribution in California and their vulnerability or susceptibility to threat appears low at this time. The previous edition of the *Inventory* noted that although this species of oak is widespread and relatively abundant, it is threatened by loss of habitat from urbanization and agricultural development in the Central Valley, and regeneration needs monitoring in many areas. It was removed from the most recent edition of the CNPS *Inventory*, and has no legal protective status under the provisions of CEQA or the state or federal Endangered Species Acts.

Northern California black walnut (*Juglans californica* var. *hindsii*) was historically reported from riparian woodlands, but is currently believed to occur in only two or three remaining stands in Contra Costa and Napa Counties. It is a candidate taxa (Category 2) for federal listing, and is on the CNPS 1B list (plants considered rare, threatened, or endangered in California and elsewhere). As noted above, the black walnut was developed and is still used in grafting with the less tolerant English walnut. Black walnut occurs sporadically along the Arroyo and as a street tree along Bernal Avenue. Trees observed within the project area have either been planted as landscaping or are presumed to be from an agricultural seed source, and are therefore not considered to be of special status.

**(b) Animal Taxa of Concern.** A number of animal taxa recognized as “special animals” by the CNDDB have been recorded from or are suspected to occur in northeastern Alameda County and southeastern Contra Costa County. “Special animals” is a broad term referring to those animal species with legal status, or considered significant because of restricted distribution, declining habitat, or other factors. In addition to identifying special animals known or suspected to possibly occur in the surrounding area, Table 47 also provides information on their status, preferred habitat characteristics, and conclusions regarding potential for occurrence in the project area.

Potentially suitable habitat for 17 of the 30 animal taxa listed in Table 47 occurs within the project area. Most of the taxa of concern are raptors and other bird species that may occasionally forage in the open fields and grassland, but individual nests or suitable nesting habitat was not encountered during the January 1995 field survey. Three taxa – California red-legged frog, western pond turtle, and yellow warbler – may utilize the aquatic and forest habitat associated with the Arroyo. Routine maintenance of the tributary stream channel and drainage ditches in the southeastern portion of the project area has eliminated or severely limited the suitability of habitat for the aquatic insects of concern. No evidence of occurrence or suitable habitat for the other 13 special-status taxa – including Alameda whipsnake, California tiger salamander, western spadefoot toad, San Joaquin kit fox, American badger, Berkeley kangaroo rat, and roosting habitat for the bat taxa of concern – was encountered during the surveys.

Suspected species that may utilize the Arroyo would be restricted to habitat within the creek corridor. The 1986 survey reported that “many vertebrate species (mammals, birds, reptiles and amphibians) were observed utilizing the site for shelter and forage.” Areas of dense willow along the Arroyo provide suitable breeding habitat for yellow warbler. Warblers occur in other wooded habitat during migration and winter months, but are more common in riparian habitat and tend to breed in riparian cover with dense understory. Both western pond turtle and California red-legged frog would be restricted to the aquatic habitat of the

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<sup>83</sup> Coate and Winchester, *op. cit.*



creek. Detailed surveys during the breeding season would be necessary to provide a conclusive determination on presence or absence of these three taxa along this segment of the Arroyo. Since the Arroyo corridor is to be retained as open space (the project would construct no improvements within the creek channel), further survey work would not appear necessary.

The project area provides potentially suitable foraging habitat for a number of raptors and other bird taxa of concern, including loggerhead shrike, horned lark, tricolored blackbird, northern harrier, black-shouldered kite, burrowing owl, ferruginous hawk, merlin, golden eagle, prairie falcon, and peregrine falcon. As noted above (p. 281), red-tailed hawk nest was observed in a large valley oak tree along the eastern edge of the riparian forest, as indicated in Figure 38 (p. 287); an adult red-tailed hawk was perched near the nest and displayed threatening behavior when the nest was approached during the January 1995 survey, indicating that the nest is still in active use.

Raptor nests in active use are protected under the provisions of the Migratory Bird Treaty Act<sup>84</sup> and the State Fish and Game Code. With the exception of red-tailed hawk, no raptor nests were encountered during the January 1995 field survey, and suitable breeding habitat for tricolored blackbird, burrowing owl, and horned lark is absent. Two loggerhead shrike were observed foraging in the southeastern portion of the project area during the January survey, but no nests were detected. Suitable nesting habitat for resident prairie falcon, golden eagle, and peregrine falcon is absent from the project area. Ferruginous hawk, merlin, and bald eagle are most likely winter migrants and uncommon aerial transients that may forage in the project area and vicinity, but essential habitat for these species is absent.

The 1996 site reconnaissance undertaken for this EIR addressed the biological value of the dry channel of the Arroyo east of the main channel, in the northwestern part of the West Parcel.<sup>85</sup> The dry channel provides forage and cover for various species of birds and terrestrial wildlife species. It also creates considerable "edge" effect for wildlife movement back and forth between the Arroyo. If the dry channel is modified to serve as a developed use, the results would depend on the type and arrangement of the use:

- **If a park:** If the dry channel were part of a park that included the area between the channel and the Arroyo, impacts to terrestrial and avian wildlife would be greatly minimized. If the dry channel became an "island" park, its value to terrestrial wildlife would be lost because of the loss of intervening cover between the dry channel and the main channel of the Arroyo; however, some avian species would probably still nest in the remaining trees. As long as dry channel remains open to the Arroyo and is not blocked by filling or construction, its value to wildlife would remain.
- **If residential:** Filling the channel would remove approximately 150 trees over three inches diameter breast height and would contribute to cumulative loss of wildlife habitat in the region.

Filling the dry channel may require a Streambed Alteration Agreement from the California Department of Fish and Game (as noted in Chapter 2).

**(2) Wetlands.** Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or groundwater, and support vegetation adapted to life in saturated ("hydric") soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood

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<sup>84</sup> The Migratory Bird Treaty Act does not provide protection for habitat of migratory birds, but does prohibit the destruction or possession of individual birds, eggs, or nests in active use without a permit from the U.S. Fish and Wildlife Service.

<sup>85</sup> Memorandum, Sycamore Environmental Consultants to Mundie & Associates, October 15, 1996.



waters, and water recharge, filtration, and purification functions. Technical standards for delineating wetlands have been developed by the U.S. Army Corps of Engineers (Corps) and the U.S. Fish and Wildlife Service (USFWS), which generally define wetlands through consideration of three criteria: hydrology, soils, and vegetation.<sup>86</sup>

A preliminary wetland assessment was conducted on January 31 and February 1, 1995, to provide an initial estimate of the extent of area subject to Corps jurisdiction.<sup>87</sup> Routine onsite methodology described in the *Corps of Engineers Wetlands Delineation Manual*<sup>88</sup> was used to determine the extent of possible jurisdictional areas. The wetland indicator status of plant species was obtained from the *National List of Plant Species that Occur in Wetlands*,<sup>89</sup> and the hydric status of site soils was obtained from lists prepared by the Soil Conservation Service. The assessment addressed conditions at 17 sample points, determining vegetation, soils, and hydrologic characteristics at each location. The assumed extent of wetlands was then extrapolated from these data points using indicators in the field. The width of the Arroyo, tributary drainage, and smaller drainage ditches was also measured and recorded to determine possible "other jurisdictional waters of the U.S." Figure 39 shows the location of each sample point, the estimated boundary of possible jurisdictional wetlands, and estimates of other waters in the project area.

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<sup>86</sup> The U.S. Army Corps of Engineers (Corps), CDFG, and the State Water Resources Control Board have jurisdiction over modifications to stream channels, river banks, lakes, and other wetland features. Jurisdiction of the Corps is established through the provisions of Section 404 of the Clean Water Act, which prohibits the discharge of dredged or fill material into "waters of the United States" without a permit, including wetlands and non-vegetated "other waters of the U.S." The Corps uses three mandatory technical criteria (hydrophytic vegetation, hydric soils, and wetland hydrology) to determine whether an area is a jurisdictional wetland. All three of the identified technical criteria must be met for an area to be identified as a wetland under Corps jurisdiction, unless the area has been modified by human activity.

The USFWS classification system is used by the CDFG to determine wetlands. This classification system is generally more encompassing than that used by the Corps, requiring that only one of the criteria be met for an area to be considered a wetland, rather than all three as required by the Corps. Jurisdictional authority of the CDFG over wetland areas is established under §1601-1606 of the Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. The Fish and Game Code stipulates that it is "unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake" without notifying the Department, incorporating necessary mitigation, and obtaining a Streambed Alteration Agreement. The Wetlands Resources Policy of the CDFG states that the Fish and Game Commission will "strongly discourage development in or conversion of wetlands . . . unless, at a minimum, project mitigation assures there will be no net loss of either wetland habitat values or acreage." The Department is also responsible for commenting on projects requiring Corps permits under the Fish and Wildlife Coordination Act of 1958.

<sup>87</sup> *Bernal Avenue, Section 404 Jurisdictional Delineation*, Zentner and Zentner, prepared for The Planning Collaborative, 1995.

<sup>88</sup> *Wetlands Delineation Manual*, Army Corps of Engineers, Environmental Laboratory, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss., 1987.

<sup>89</sup> *National List of Plant Species That Occur in Wetlands; California (Region O)*, *National Wetlands Inventory*, Reed, P.B., U.S. Fish and Wildlife Service, Biological Report 88 (26.10), 1988.



Source: Alameda County Bernal Property Specific Plan EIR, Fig. 4.13-2 based on Zentner and Zentner, 2/95

## Wetlands and Other Waters



Based on the preliminary assessment, an estimated total of 10.69 acres of potential wetlands and other waters that may fall under Corps jurisdiction occur in the project area. This area includes approximately 4.28 acres of wetlands and waters along the Arroyo (above the ordinary high water mark), approximately 5.33 acres of wetlands and other waters along the tributary drainage channel and other smaller drainages ditches, approximately 1.02 acres of primarily jurisdictional waters associated with the detention basin at the base of the southern knoll, and 0.06 acres of three small isolated seasonal wetlands. It should be noted that a field review and verification by representatives of the Corps would be necessary to confirm and refine the actual extent of any jurisdictional wetlands and other waters. The process of verification with the Corps must be initiated by the applicant as part of the delineation process, and authorization received prior to any filling or dredging activities.

A follow-up field investigation of potential wetlands and other areas of biological interest was conducted in October 1996 by Sycamore Environmental Consultants. Their review focused on specific areas of the site that are proposed to be filled under the Cooperative Plan or the Preferred Plan. Their report recognizes that (1) the Corps of Engineers needs to verify the status of all wetlands on the site, and (2) even if loss of a particular area is found to be mitigatable on the site, all losses of jurisdictional wetlands are cumulative. The potential wetland features investigated, and findings, are summarized below:

- **Stock pond.** There is no permanent wetland vegetation around the edges of the pond (Area F in Figure 39) or in the pond, and there is no permanent standing water. Habitat is limited (at the time of the field survey, October 1996, the pond was denuded of vegetation). Because the stock pond has been contaminated, it is unknown whether it provides suitable breeding habitat for amphibian species.

In the event this feature is verified as a wetland under Corps of Engineers jurisdiction, the loss of this feature can be mitigated in some other onsite area, such as near the Arroyo.

- **Seasonal wetlands northwest of the knoll.** Two seasonal wetlands (Areas B and C in Figure 39) occur at the bottom of a small drainage and are not distinguishable as separate wetland features. At the time of the October 1996 survey, there was no vegetation in the area, but hydrophytic vegetation may be present during late winter and early spring (the Zentner and Zentner report identified this area as a seasonal wetland). At most, these are very marginal jurisdictional wetlands. Impacts of the loss of this feature are very minor and could be mitigated elsewhere on the site.
- **Drainage channel B-2-1.** This drainage channel is the portion of B-2-1 that runs on the northwest side of the UPRR tracks from I-680 on the south to the southern end of B-2-2 on the north (roughly, the middle one-third of the drainage labeled H in Figure 39). The channel is open, straight, narrow, and non-lined. It is vegetated with various grasses and herbaceous hydrophytic species. Water was present in the ditch. From a legal perspective, there are no "wetlands" present, only waters of the U.S. (the ditch itself). The ditch cannot be described as providing "significant habitat," but it provides foraging habitat for various species of birds and mammals. Great blue heron, Great egret, and mallards were observed foraging in the ditch. The ditch probably also provides breeding habitat for various amphibian and aquatic species. Converting the open ditch to a culvert would result in the loss of aquatic habitat; however, opportunities exist onsite for creating habitat of greater value than what would be lost.

As noted, the U.S. Army Corps of Engineers and California Regional Water Quality Control Board (RWQCB) would have jurisdiction over any wetlands on the site. Jurisdictional determinations will be necessary for the creeks and channels within the study area, subject to the provisions of Section 404 of the

Clean Water Act and Sections 1601-1603 of the CDFG code. The Corps regulates fill placement in wetlands, which, as noted earlier, are considered "waters of the United States." The Corps has issued nationwide permits that may apply to some or all of the activities that could occur as development takes place on the site. Activities not covered by an existing nationwide permit, and any disturbance to onsite wetlands in excess of one-third acre or 500 linear feet (200 linear feet where a roadway is involved), will may require an individual permit to be filed with the Corps for those areas determined to be within the Corps' jurisdiction. A water quality certification must be obtained from the RWQCB before a Corps permit can be granted. Federal approval to fill wetlands is conditional on the development of mitigation plans that will minimize adverse effects on wetland resources or compensate for their loss.

The proposal to provide a golf course on the site creates opportunities for onsite mitigation. The golf course water feature could conceivably be developed, wholly or in part, as a replacement wetland for the potential wetland areas that are proposed to be filled.

Both the California Department of Fish and Game (CDFG) and the U.S. Army Corps of Engineers, along with the Alameda County Flood Control and Water Conservation District, are assumed to have jurisdiction over the Arroyo de la Laguna corridor. Project plans do not include any improvements in the corridor.

## **2. Impacts**

### **a. Impacts of the Cooperative Plan and the Preferred Plan**

**(1) Impacts on Riparian Habitat.** The Arroyo is a biotic resource of regional significance. While neither the Cooperative Plan nor the Preferred Plan proposes any construction or improvements within the corridor of the Arroyo, development allowed by the specific plan could affect the riparian habitat along the Arroyo if the permitted development or infrastructure is located within or too close to the sensitive habitat areas.

Mitigation Measure J2b, for transportation impacts, requires modifications of the I-680/Bernal Avenue interchange that could include construction of new ramps and widening of the existing bridge over the Arroyo. Construction of new interchange elements could occur only after thorough Caltrans review, including CEQA review, that would include analysis of impacts on biological resources.

<b>Impact O1. Potential for adverse effects on the riparian habitat of the Arroyo de la Laguna.</b>
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In the Cooperative Plan and the Preferred Plan, a number of the drainage channels east of I-680 that are tributary to the Arroyo may be culverted, relocated, or widened (see Figure 8D, p. 38). These channels do not foster riparian habitat in their current condition; therefore, modifications would have no significant adverse impact.

In the Preferred Plan, the northern part (approximately one-half) of the dry channel east of the Arroyo would be filled. This action could require the removal of some of the 150 trees over three inches in diameter breast height (the precise number has not been identified; it will depend on the precise extent of the fill), and would thus adversely affect the riparian habitat associated with this channel. It may be possible to save many of the jeopardized trees, since they are located at grade along the edge of the channel, rather than within its banks.



In both the Cooperative Plan and the Preferred Plan, development would be located close to this area, and consequently could affect the riparian habitat.

**Impact O2. Potential for adverse effects on the riparian habitat of the dry channel east of the Arroyo.**

In the Preferred Plan, adverse effects would result from elimination; in the Cooperative Plan, they would result from encroachment.

**(2) *Heritage Trees.*** Any heritage trees located on the site, including the street trees along Bernal Avenue, could be affected by development permitted by the specific plan.

**Impact O3. Potential for removal of heritage trees located in the study area.**

**(3) *Wetlands.*** Based on the investigation described in the discussion of “Setting” above, wetlands appear to exist on the site. These areas – the stock pond, the small seasonal wetland(s) northwest of the knoll, and one or more drainage channels – would be affected by development:

- **Stock pond.** Under the Cooperative Plan, the stock pond would be filled to create the alignment for Valley Avenue. Under the Preferred Plan, the stock pond could be retained.
- **Seasonal wetland(s) northwest of the knoll.** Under the Cooperative Plan, this area would be filled to create a site for the playfield next to the elementary school. Under the Preferred Plan, the wetlands could be retained.

**Impact O4. Potential adverse effects on wetlands as a result of future development.**

The potential for this impact to occur is greater in the Cooperative Plan, but possible in the Preferred Plan as well.

**(4) *Wildlife.*** The project would displace some animals that currently visit the grasslands on the site and the area of riparian vegetation in the dry channel east of the Arroyo de la Laguna. Because no sensitive species were identified in those areas, such an impact would not be significant.

Animal species that populate the riparian habitat in the vicinity of the site could be adversely affected by the use of fertilizers, herbicides and other chemicals on the golf course. These impacts could result from animals’ visiting the golf course after chemicals have been applied, or from chemicals’ being carried off the site, potentially into water courses, by rain or irrigation.

**Impact O5. Site development and use may degrade runoff, posing a threat to water quality in the Arroyo and resulting in adverse effects on riparian habitat.**

Site development could disturb raptor nesting which was observed on the site in the 1995 field study.

**Impact O6. Potential adverse effects of site development on raptor nesting.**

### **b. Impacts of Alternative 2**

Alternative 2 differs from the Cooperative Plan in that it would not require the filling of the stock pond or the small drainages northwest of the knoll; it also does not require culverting of the major drainage channels, but some smaller ones would likely be filled or culverted. Impacts found for the Cooperative Plan and Preferred Plan would apply to Alternative 2.

<b>Impact O1.</b>	<b>Potential for adverse effects on the riparian habitat of the Arroyo de la Laguna.</b> Same as for the Cooperative Plan and Preferred Plan.
<b>Impact O2.</b>	<b>Potential for adverse effects on the riparian habitat of the dry channel east of the Arroyo.</b> Similar to the impact for the Preferred Plan, but less habitat is likely to be affected.
<b>Impact O3.</b>	<b>Potential for removal of heritage trees located in the study area.</b> Same as for the Cooperative Plan and Preferred Plan.
<b>Impact O4.</b>	<b>Potential adverse effects on wetlands as a result of future development.</b> Same as for the Cooperative Plan and Preferred Plan, but less area is likely to be affected.
<b>Impact O5.</b>	<b>Site development and use may degrade runoff, posing a threat to water quality in the Arroyo and resulting in adverse effects on riparian habitat.</b> Same as for the Cooperative Plan and Preferred Plan.
<b>Impact O6.</b>	<b>Potential adverse effects of site development on raptor nesting.</b> Same as for the Cooperative Plan and Preferred Plan.

### **c. Impacts of Alternative 3**

Alternative 3 would permit development on the same area as the Cooperative Plan, and would have the same biological impacts. The impacts of Alternative 3 are discussed in the County EIR, Chapter 4.13.

## **3. Mitigation Measures**

**Impact O1.** Potential for adverse effects on the riparian habitat of the Arroyo de la Laguna.

**Measure O1a.** Require that the specific plan provide setbacks of at least 100 feet from the existing centerline of the Arroyo de la Laguna or at least 10 feet from the outermost drip line of existing trees along the main channel of the Arroyo, whichever is greater.

The setback requirement is intended to protect habitat vegetation. Therefore, encroachment into the vegetated zone along the main channel is to be avoided wherever possible.

Certain elements of specific plan development may require encroachment. Those elements include provision of a trail within the riparian corridor, relocation of the existing sewer line and pump station (see Section D, Wastewater, Mitigation D1a), location of a flood control



berm on the east side of the Arroyo (see Chapter 4, Option 5), provision of a maintenance road adjacent to the berm, construction of a weir for the bypass channel (if that option is chosen; see Chapter 5, Part B), or extension of the golf course or residential development (including yards) beyond the setback distance.

*For these and any other encroachments:*

**Measure O1b.** Require consultation with California Department of Fish and Game in any areas subject to their jurisdiction prior to any proposed encroachment into the designated corridor, or consultation with the U.S. Army Corps of Engineers prior to any activity that would occur within the banks of the Arroyo channel.

The State Department of Fish and Game asserts jurisdiction on the land side of the channel extending 100 feet from the centerline of the channel.

Implementation of Measures O1a and O1b will reduce potential impacts of the Arroyo de la Laguna and to less-than-significant levels.

**Impact O2.** Potential for adverse effects on the riparian habitat of the dry channel east of the Arroyo. (Preferred Plan)

**Measure O2a.** Modify the land use plan to avoid filling the dry channel or disturbing any area within 50 feet of the centerline of the channel, *or*

**Measure O2b.** Replace affected habitat elsewhere on the site, *or*

**Measure O2c.** Conform to the requirements of a Streambed Alteration Agreement or other requirements of other jurisdictional agencies.

Implementation of Measure O2a or O2b or O2c, or a combination of these measures, would reduce potential impacts on the riparian habitat of the dry channel east of the Arroyo to less-than-significant levels.

**Impact O3.** Potential for removal of heritage trees located in the study area when development occurs.

**Measure O3.** Prior to the approval of a grading plan for the site, require the preparation and approval of a Master Landscape Plan and Tree Preservation Plan.

These plans shall identify trees to be retained and trees to be removed prior to, or as part of, mass site grading. The plans shall:

- Retain mature oaks and sycamores when not within a road right-of-way that cannot feasibly be modified (including oaks located between the Arroyo de la Laguna and the dry channel).
- Identify the possibility of salvaging mature oak or sycamore trees that must be removed.
- Establish a replacement planting program for the removal of any mature oaks from the vicinity of the southern knoll, and for the removal of any sycamore trees from the median or along the frontage of Bernal Avenue.

Implementation of Measure O3 will partially mitigate potential impacts on heritage trees. To fully mitigate these impacts would require implementation of Measures N4a through N4d.

Impact O4. Potential adverse effects on wetlands as a result of future development.

**Measure O4a.** Prior to the approval of a final grading plan, verify and delineate the locations of wetlands on the site.

**Measure O4b.** If wetlands that would be adversely affected by the project are delineated on the site as a result of Measure O4a, require the preparation of a mitigation plan, including an avoidance alternative, that will meet federal and state requirements prior to the approval of a final grading plan.

If avoidance is not feasible, this plan must identify replacement wetlands in the proportions required by regulatory agencies and a mechanism for developing and maintaining those replacement wetlands.

With the implementation of Measures O4a and O4b, potential impacts on wetlands would be mitigated to a less-than-significant level.

Impact O5. Potential adverse effects of golf course fertilizers, herbicides and other chemicals on animal species.

**Measure O5.** Prepare a Golf Course Management Plan. Same as Measure C4b.

Implementation of Measure O5 would reduce Impact O5 to a less-than-significant level.

Impact O6. Potential adverse effects of site development on raptor nesting.

**Measure O6a.** Prior to development-related activity on the site, confirm presence of the nest.

Before the commencement of grading or other activity, conduct a site visit to ascertain whether the nest observed in 1995 remains, or another nest has been established.

*If any nest is present, then Measure O6b applies.*

**Measure O6b.** Restrict development in the vicinity of the red-tailed hawk nest.

Improvements in the vicinity of the nest should be coordinated with representatives of the California Department of Fish and Game to minimize disturbance and possible loss of the active nest during the nesting time. This coordination should include establishment of a buffer area around the nesting site within which land development activities (such as grading and other construction activities) and land uses (including the regional trail and irrigated areas of the golf course) are restricted. The buffer area should extend 50 feet from the base of the trunk or 25 feet from the drip line, whichever is greater, of the tree in which the nest is located.

Implementation of Measure O6 would reduce Impact O6 to a less-than-significant level.



#### **4. Summary Comparison of Impacts and Mitigated Impacts: Biology**

	<b>Cooperative Plan</b>	<b>Preferred Plan (Alternative 1)</b>
<b>Impact O1.</b> <b>Potential for adverse effects on the riparian habitat of the Arroyo de la Laguna.</b>	S/LS	S/LS
<b>Impact O2.</b> <b>Potential for adverse effects on the riparian habitat of the dry channel east of the Arroyo.</b>	S/LS	S/LS
<b>Impact O3.</b> <b>Potential for removal of heritage trees located in the study area when development occurs.</b>	S/S; S/LS if Measures N4a through N4d are also implemented.	S/S; S/LS if Measures N4a through N4d are also implemented.
<b>Impact O4.</b> <b>Potential adverse effects on wetlands as a result of future development.</b>	S/LS	S/LS
<b>Impact O5.</b> <b>Potential adverse effects of golf course fertilizers, herbicides and other chemicals on animal species.</b>	S/LS	S/LS
<b>Impact O6.</b> <b>Potential adverse effects of site development on raptor nesting.</b>	S/LS	S/LS

Key: \*/\*: significance before mitigation/significance after mitigation.  
 S: significant (C): contributes to cumulative impact  
 LS: less than significant n.a.: impact does not apply to this alternative  
 \*: no mitigation required ND: not determinable  
 † Less than significant before mitigation, but contributes to cumulatively significant impact.  
 NM: no mitigation possible (beyond policies, programs, and other regulations already in place).

## **P. PUBLIC HEALTH AND SAFETY**

### **1. Setting**

The California Health and Safety Code (§ 25501) defines a hazardous material as “. . . any material that, because of its quantity, concentration or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or to the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, radioactive materials and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.”

#### **a. Regulatory Framework**

The use, storage and disposal of hazardous materials, including the management of contaminated soils and groundwater, are regulated by Federal, State and local laws and regulations. Regulatory agencies with responsibilities in this area include:

**(1) U.S. Environmental Protection Agency (EPA).** The EPA is responsible for enforcement and implementation of Federal laws and regulations pertaining to hazardous materials. The Federal regulations are codified primarily in Title 40 of the Code of Federal Regulations (40 CFR). The legislation is outlined in the Resource Conservation and Recovery Act of 1976 (RCRA), the Superfund Amendments and Reauthorization Act (SARA), and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). The Federal Hazardous Waste Act regulates the transportation of hazardous materials. These laws and associated regulations include specific requirements for facilities that generate, use, store, treat and/or dispose of hazardous materials. The EPA provides oversight and supervision for some site investigation/remediation projects, evaluates remediation technologies and develops hazardous materials disposal restrictions and treatment standards.

**(2) Department of Toxic Substances Control (DTSC).** In California, DTSC is authorized by EPA to enforce and implement hazardous materials laws and regulations. California regulations pertaining to hazardous waste incorporate Federal regulations. The State hazardous materials regulations are contained in Title 26 of the California Code of Regulations (CCR). DTSC acts as the lead agency for some soil and groundwater cleanup projects. DTSC sets cleanup and action levels for subsurface contamination; these levels are equal to, or more restrictive than, Federal levels. DTSC has developed land disposal restrictions and treatment standards for hazardous waste disposal in California.

**(3) San Francisco Bay Regional Water Quality Control Board (RWQCB).** The project is located within the jurisdiction of the San Francisco Bay RWQCB. The RWQCB is authorized by the Porter-Cologne Water Quality Act of 1969 to implement standards to protect the waters of the State. The RWQCB provides oversight for sites where the quality of groundwater or surface waters is threatened. Extraction and disposal of contaminated groundwater due to investigation/remediation activities or due to dewatering during construction requires a permit from the RWQCB if the water is proposed to be discharged to storm drains, surface water or land. A permit from the local sanitary treatment facility is required if water is proposed to be discharged to the sanitary sewer.

**(4) California Air Resources Board (ARB).** The California Toxic “Hot Spots” Information and Assessment Act of 1987 requires that industry provide information to the public on emissions of toxic air contaminants and their impact on public health. The Act requires the ARB and local air quality districts to



inventory sources of over 200 toxic air contaminants, to identify high priority emission sources, and to prepare a health risk assessment for each of these priority sources.

**(5) Alameda County Flood Control and Water Conservation District, Zone 7.** Zone 7 manages groundwater in the Livermore-Amador Valley and works in conjunction with the RWQCB to oversee and provide guidelines for investigating and remediating sites affected by the release of petroleum hydrocarbon fuels from underground tanks.

**(6) Alameda County Department of Environmental Health (DEH).** The Alameda County DEH (in the County's Health Care Services Agency) enforces State regulations pertaining to hazardous waste control (California Health and Safety Code, Chapter 6.5), and maintains the Chapter 6.95 hazardous materials release response plans and inventory. In addition, in some cities, the DEH is responsible (under California Health and Safety Code, Chapter 6.7) for underground storage tank permitting and enforces petroleum underground storage tank cleanup.

**(7) City of Pleasanton.** Businesses that use, store or handle hazardous materials are subject to Pleasanton's Hazardous Materials Storage Permit Ordinance. This ordinance is designed to (a) define materials that are hazardous, (b) provide early warning in the event of a discharge, (c) minimize the potential for groundwater contamination, and (d) provide a means of inventorying, monitoring and inspecting the storage of hazardous materials in locations throughout the City. A hazardous materials coordinator in Livermore oversees this program for the Livermore/Pleasanton Fire Department, with assistance in Pleasanton from chemical specialist to help businesses in comply with the provisions of the ordinance.

The City currently contracts with a hazardous materials consultant to maintain technical expertise in implementing the Hazardous Materials Storage Permit Ordinance and recent Fire Code compliance.

**b. Effects of Land Use Activities:**

**Potentially Hazardous Conditions on and near the Project Site**

**(1) Summary.** Site investigations and reviews of soil and ground water test results indicate no substantial evidence of significant hazardous waste contamination at the site. The basis for this conclusion is presented in *Environmental Baseline Report*, City and County of San Francisco (complete citation in Chapter 9); Chapter 5.3 of that document is hereby incorporated by reference. However, both soil and groundwater test results available at the time the *Baseline Report* was prepared indicated low levels of chemical constituents of concern, and noted that relatively little soil and groundwater testing for potential contamination (such as from pesticides, volatile organics or semi-volatiles) had been conducted.

Sources of potential contamination identified in the *Baseline Report* include both onsite activities and offsite uses upgradient of the study area. Onsite uses include agricultural activities and previously included wastewater operations (sludge drying beds, spray irrigation and evaporation ponds); offsite uses mapped in the *Baseline Report* include the Kaiser Aluminum and Chemical Corporation operation, the Nuodex Inc. operation and the old Pleasanton Wastewater Treatment Plant. These onsite and offsite uses are discussed in turn below.

**(2) Potentially Hazardous Conditions on the Project Site.** To evaluate previous activities or conditions that may have contributed to hazardous materials contamination at the project area, a sequence of "paired" aerial photographs, dating from 1957 to 1986, were examined by GeoResource Consultants. Through examination of these photographs, an outline of recent historical land use has been constructed and is presented in Table 48. Previous land use activities that may have resulted in soils and/or groundwater contamination include wastewater effluent irrigation and sludge drying beds and disposal, as well as past agricultural activities.

**Table 48**  
**Examination of Aerial Photographs of the Project Area**

<b>Year Photograph Was Taken</b>	<b>Observation</b>
1957, 1959	Prior to construction of I-680; all project area appears to be agricultural. Evaporation ponds at old Pleasanton Wastewater Treatment Plant are present. Storage sheds at ranch house and yard are visible.
1966	I-680 under construction; project area is agricultural.
1969, 1979	Agricultural, except for portions of the Western Parcel; pond on project area, adjacent to Kaiser appears clear. Storage sheds visible at ranch house yard.
1973	Furrowed land in portions of Western Parcel. Pond adjacent to Kaiser does not appear clear.
1979	Appearance of evaporation pond ("Lake Monaco") in Western Parcel.
1978, 1980	Spray irrigated lands, evaporation ponds, and sludge drying beds well defined.
1982	Sludge drying beds and spray irrigation areas poorly defined. Evaporation pond ("Lake Monaco") may still be present.
1984, 1986	Spray irrigation areas in Western Parcel appear furrowed. Waste treatment ponds at old treatment plant not present.

Source: GeoResources Consultants, Inc., 1988

(a) *Agricultural Use.* Historically, the project area has been used mainly for agricultural purposes, which implies potential contamination from the use of pesticides and herbicides. Conversations with personnel of the Alameda County Agricultural Commissioner's Office indicate that agricultural use has been primarily for tomatoes, sugar beets, grain, grain hay alfalfa, cucumbers, and cauliflower.<sup>90</sup> Pesticide use for these crops is on record with the County. A list of pesticides commonly used in conjunction with crops known to have been grown at the project area are presented in Table 49 below.

During a site reconnaissance in 1993, a shed containing pesticides and insecticides including Furadan, Alanap, Gavicide, and Sodium Sulfide was observed. Following that site reconnaissance, pesticides and insecticides were removed from the site as noted in the County DEIR (Appendix 4.17A).<sup>91</sup>

Agricultural land use also implies the potential for on-site fuel storage used for farming equipment. However, fuel storage may or may not have occurred underground. Conversations with personnel of the City of Pleasanton Fire Department indicate that underground fuel storage for farming purposes is unlikely.<sup>92</sup>

<sup>90</sup> Personal Communication, Mr. Curtner of the Alameda County Agricultural Commission Office, August 1988.

<sup>91</sup> F.E. Jordan, Inc.

<sup>92</sup> Personal communication, Mr. Mueller and Mr. Klenk of the Pleasanton Fire Department, August 1988.



**Table 49**  
**Common Pesticide Use on Crops**

Crop	Typical Pesticide Used
Grain	Grain Herbicides 2,4-D, MCPA
Alfalfa	Furadan
Cauliflower	Lannate, Monitor, Sustox
Sugar beets	Endrin
Cucumbers	Phosthine
Tomatoes	unknown*

- \* Tomatoes are not currently grown in Alameda County; most recent cultivation of this site for tomatoes is estimated to be no later than the early 1970s.

Source: Alameda County Agricultural Commission, 1988 and 1997

(b) *Wastewater Treatment.* Wastewater in the Valley has been treated at various wastewater treatment plants and has either been applied to the ground surface by spray irrigation or discharged to percolation ponds. The old Pleasanton Wastewater Treatment Plan (PWTP), located on Sunol Road upgradient of the project area, began operation in 1910. From 1949 until 1980, when the facility was closed, the PWTP discharged effluent to leach fields, used the effluent for spray irrigation, or released it into percolation ponds within or near the project area<sup>93</sup>. In addition, sludge was collected from the digester of the treatment plant when in operation and spread onto a sludge drying bed on the Western Parcel within the project area. Figure 40 shows the location of the PWTP, the effluent irrigation areas, and the sludge drying bed in and near the project area.

Conversations with Mr. Taylor of the Pleasanton Sewer Department revealed that the sludge from the digester has never been chemically tested.<sup>94</sup> This material may be high in heavy metal content since metals are particularly immobile, and may also contain contaminants similar to that of the effluent. Therefore, during a project area reconnaissance conducted by GRC personnel in 1988, two samples were collected within the sludge drying bed. Both samples were tested for halogenated volatile organics, aromatic volatile organics, organochlorine pesticides, and TTLC/CAM metals (EPA Methods 8010, 8020, 8080, and 6010, respectively). Results from chemical testing of the sludge indicate that neither volatile organics nor organochlorine pesticides are present above detection limits. CAM metals, however, were detected. Analytical results for CAM metals (as well as the other analyses) from the two sludge samples (PL-1 and PL-2) are listed in Appendix 4.17C of the County DEIR. These results indicate that metal concentrations are considerably below Total Threshold Limit Concentration (TTLC) values presented in the California Administrative Code Title 22, Chapter 30, Section 6699. Soils with values above the TTLC are classified as hazardous by the State of California.

<sup>93</sup> *Water Quality Conditions and an Evaluation of Ground and Surface Water Sampling Programs in the Livermore - Amador Valley, California*, S.K. Sorenson et al, USGS, 1985.

<sup>94</sup> Personal communication, Mr. Taylor of City of Pleasanton, Sewer System Department, August 1988.

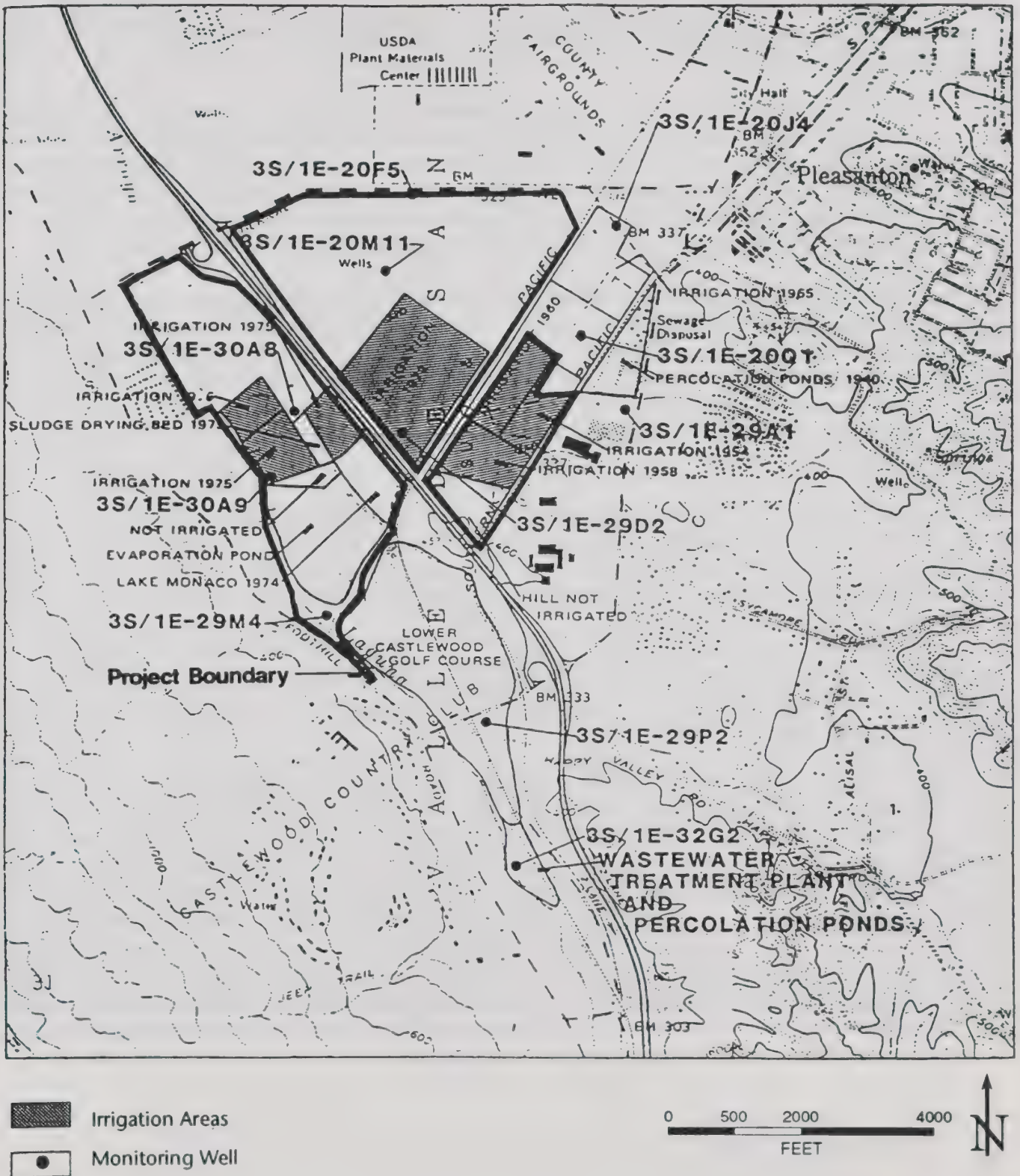


Figure 40

## Effluent and Sludge Discharge Areas

Source: Alameda County Bernal Property Specific Plan EIR, Fig.4.17-1 based on Geo/Resource Consultants, Inc., 1988



**(3) Previous Contamination From Adjacent Manufacturing Activities.** Potential offsite sources of contamination and on-site areas of concern are shown on Figure 41.

***(a) Kaiser Aluminum and Chemical Corporation.*** In 1981, an accidental polychlorinated biphenyls (PCB) release occurred on the adjacent Kaiser Aluminum and Chemical Corporation (Kaiser) property. What is referred to as the "North Lake" on the Kaiser property was contaminated with low levels of PCBs. This lake had an overflow duct connecting to the project area. Prior to cleanup of the North Lake, the water levels rose, overflowing into the project area and contaminating the stock pond (referred to in Figure 41 as the "cow pond") located on the project site at the southeastern edge of the East Parcel.

The spill and the contaminated water were reported to the appropriate agencies, with the Regional Water Quality Control Board (RWQCB) becoming the lead agency for overseeing remediation. Acceptable standards for residual levels of PCBs were developed by RWQCB, and Kaiser cleaned the project area to or below these levels. On December 31, 1986, the RWQCB issued a "no further action" letter regarding the cow pond remediation. Since then, Kaiser has requested the California Department of Toxic Substances Control (DTSC) to determine whether residual levels were acceptable for Kaiser's future anticipated re-zoning of their property for residential use.

The DTSC reviewed the PCB levels developed in 1986 by the RWQCB for the remediation of the cow pond. DTSC determined, through a health risk analysis, that the levels of remediation approved in 1986 are not acceptable for residential use. DTSC requires a review of the cow pond, determination of present PCB levels, and remediation if detected levels exceed current DTSC standards for residential use.<sup>95</sup> Kaiser is currently commencing this investigation.<sup>96</sup>

Given Kaiser's future anticipation of rezoning their property for residential uses, the California Department of Toxic Substances Control (DTSC) has become the lead agency for any required environmental remediation for health protection purposes.

***(b) Nuodex, Inc.*** In addition to the PCB contamination described above, groundwater contamination from leaking underground storage tanks containing mineral spirits occurred at Nuodex, Inc., located on Sunol Boulevard, adjacent to the project area and north of Kaiser (see Figure 41). Contaminant investigations have included the installation and testing of six groundwater monitoring wells (on the Nuodex property) constructed downgradient of the tank storage area. In 1984, mineral spirits were detected in one of the wells at a concentration of 14,000 parts per billion (ppb). The investigation included the definition of plume boundaries and the implementation of a pump test to determine the rate of contaminant migration. Based on findings from the field investigation and communications with the RWQCB, it was decided to extract contaminated groundwater using existing monitoring wells. Conversations with Mr. Mueller of the City of Pleasanton Fire Department indicate that the project area has been remediated and that the plume had not traveled off-site.<sup>97</sup>

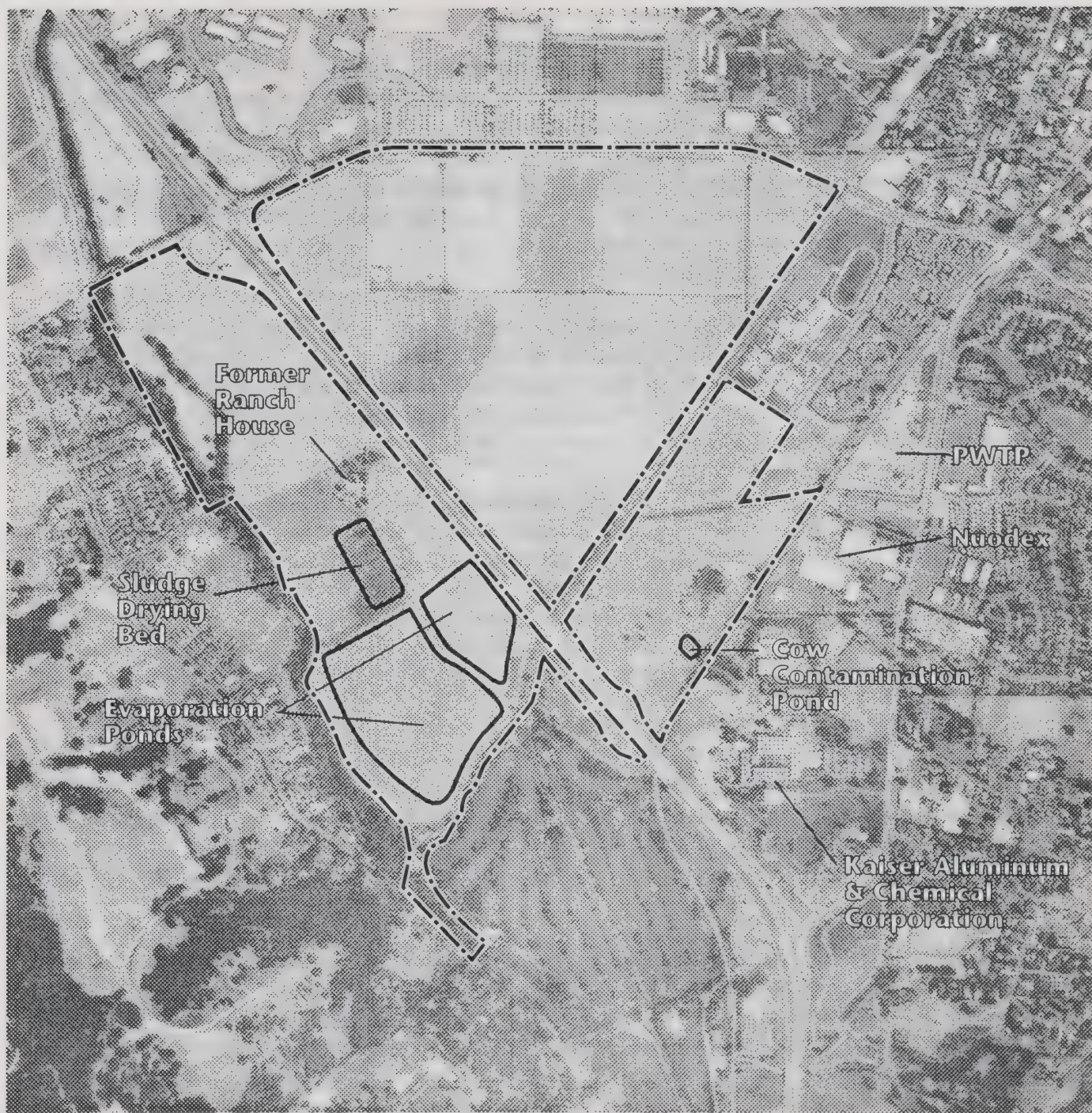
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<sup>95</sup> Burke, Robert B., Vice President and General Manager, Kaiser Center, Inc. Correspondence with Mr. Willy Tsai, Operations Manager, San Francisco Department of Water. November 15, 1993.

<sup>96</sup> Ibid.

<sup>97</sup> Personal communication, Mr. Mueller of the City of Pleasanton Fire Department, August 1988.





Source: Alameda County Bernal Property Specific Plan EIR, Fig.4.17-2  
based on Geo/Resource Consultants, Inc., 1988



Figure 41  
Groundwater Contamination Sources



(c) *Other Sites.* The USDA Plant Materials Company, a company that conducted plant research work, previously existed to the north of the project area. According to personnel at the Pleasanton Fire Department, it is unlikely, although not definitely known, that toxic chemicals were used by this firm.<sup>98</sup>

**(4) Other Activities Outside the Project Area Potentially Resulting in Groundwater Contamination.** There are currently several sources of potential groundwater contamination upgradient of the project area. Although there is no evidence to date that contamination has occurred, the presence of these potential sources should be noted.

(a) *Pleasanton Corporation Yard.* The City of Pleasanton's maintenance yard, commonly known as the Corporation Yard, was formerly located on the old PWTP property. When the yard was in operation, it had five underground fuel tanks for gasoline and diesel fuel that ranged in size from 1,000 gallons to 7,500 gallons. Use of this site has been discontinued, the tanks have been removed, and the EPA has cleared the former yard as a hazardous waste site.

(b) *Proficient Food Company.* There are four underground fuel tanks at the Proficient Food Company property located between Nuodex, Inc., and Kaiser. Two tanks contain diesel fuel, one contains gasoline, and the other stores waste oil. These tanks are also tested annually and results are kept on file at the Pleasanton Fire Department. There is no record of leakage to date. Proficient Food Company is now required to monitor continuously to insure that any leakage is detected.

### **c. Groundwater Quality of the Livermore-Amador Valley and the Project Area**

**(1) Previous Groundwater Monitoring.** A monitoring well network system was established by the U.S. Geological Survey (USGS) and Alameda Flood Control District, Zone 7 in 1975 to determine whether the groundwater contained levels of hazardous materials. Initially, 30 wells, 10 to 80 feet deep, were constructed near the previous wastewater disposal areas. These wells, in addition to 30 existing wells, were sampled for various chemical parameters. In 1976, an additional 27 wells, 20 to 80 feet deep, were constructed between wastewater disposal sites. Observations from the wells were recorded into the 1980s. Figure 40 (p. 301) shows the locations of current monitoring wells.

The results of the groundwater monitoring have been reported elsewhere<sup>99</sup> and are summarized in Chapter 5, Part C (Water). The monitoring effort confirmed that previous application of wastewater effluent apparently had a deleterious effect on groundwater by raising concentrations of specific conductance (TDS), chloride, and nitrate. Many of these wells have exceeded the maximum contaminant level (MCL) recommended for specific conductance, TDS, and nitrate, although chemical testing in 1983 and 1988 of monitoring wells indicated decreases in these parameters.<sup>100</sup>

Monitoring well samples were not tested for pesticides, heavy metals, volatile organics, or semi-volatiles.

**(2) Other Groundwater Quality Investigations.** However, testing for some pesticides has been conducted on water samples from the four operating irrigation wells. These tests indicate that in February 1988, the pesticides listed in Table 49 were tested for and not detected. Other water quality data collected

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<sup>98</sup> Personal communication, Mr. Klenk of the Pleasanton Fire Department, September 1988.

<sup>99</sup> Sorenson, 1985; *Land Application of Wastewater and Its Effect on Groundwater Quality in The Livermore-Amador Valley, California*, Marc A. Sylvester, USGS, 1983

<sup>100</sup> Sylvester, 1983 and Alameda County, 1988.

from these wells indicate that none of the chemical constituents tested exceed or approach the Primary Drinking Water Standards Maximum Contaminant Level.<sup>101</sup>

According to personnel at the City of Pleasanton Sewer Department, testing of effluent samples has not indicated high concentrations of heavy metals as of 1988.<sup>102</sup> However, testing for volatile organics or semi-volatiles had not been conducted.

In 1994, GRC sampled and analyzed groundwater from monitoring well 22-1/2-F in the project area (see Figure 40).<sup>103</sup> Groundwater was sampled for Total Recoverable Hydrocarbons, CAM 17 metals, volatile organics, chlorinated pesticides, PCBs, and semi-volatile organics. With the exception of two metals – barium and zinc – none of the analyses detected any compounds above the reported detection limits. The barium (detected at 0.017 parts per million (ppm)) and zinc (at 0.045 ppm) are below state and Federal action levels of 1.0 ppm for barium and 5.0 ppm for zinc. Therefore, no chemical compounds were detected from water at the site that exceed existing state or Federal drinking water standards. Additionally, test results showed that chloride levels had decreased to 113 mg/l, and TDS levels had decreased to 640 mg/l. The results of the analyses are tabulated in the County DEIR (Appendix 4.17B).

## **2. Impacts**

### **a. Impacts of the Cooperative Plan and the Preferred Plan**

Development of the project site consistent with the Cooperative Plan or the Preferred Plan could result in adverse effects on the residents of and workers in the area associated with both existing contamination (if any) associated with agricultural use, effluent disposal, and possible storage of hazardous materials on the site, and the future use and/or storage of hazardous materials on the site.

<b>Impact P1.</b>	<b>Introduction of residents and workers into an area affected by existing contamination (if any).</b> If soil and water contaminants are present on the site in concentrations exceeding established maximum contaminant levels, their presence may have an adverse impact on public health if the site is developed and occupied.
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<b>Impact P2.</b>	<b>Potential adverse effects on residents and workers of possible future soil and water contamination.</b> Soil and water contaminants could conceivably be introduced to the site via use and/or storage of hazardous materials during the life of the project.
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<sup>101</sup> Basic data files, San Francisco Water Department, 1988.

<sup>102</sup> Personal communication, Mr. Taylor of City of Pleasanton, Sewer System Department, August 1988.

<sup>103</sup> "Preliminary Water Quality Results Pleasanton Lands" and "Confirmation Water Quality Results Pleasanton Lands," GeoResources Inc., Memorandums, February 14, 1994 and March 18, 1994.



## **b. Impacts of Alternative 2**

Potential impacts associated with development permitted by Alternative 2 would be the same as impacts associated with the Cooperative Plan and the Preferred Plan.

<b>Impact P1.</b>	<b>Introduction of residents and workers into an area affected by existing contamination (if any).</b>  Same as for the Cooperative Plan and Preferred Plan.
<b>Impact P2.</b>	<b>Potential adverse effects on residents and workers of possible future soil and water contamination.</b>  Same as for the Cooperative Plan and Preferred Plan.

## **c. Impacts of Alternative 3**

The impacts of this alternative are discussed in the County EIR Chapter 4.17.

## **3. Mitigation Measures**

**Impact P1.** Introduction of residents and workers into an area affected by existing contamination (if any).

### **Measure P1a. Determine existing contamination (if any).**

Prior to grading, update and complete site and record investigations to establish the extent and character of existing contamination, consistent with the requirements of General Plan Program 17.1. To satisfy this requirement, a Preliminary Endangerment Assessment shall be prepared and submitted to the California Department of Toxic Substances Control (DTSC), the Alameda County Department of Environmental Health, and the City of Pleasanton. The DTSC Preliminary Endangerment Assessment Guidance Manual shall be consulted in planning and carrying out the initial investigation of the site. The developer shall comply with statutory requirements and state regulations in responding to the recommendations in the investigation report.

### **Measure P1b. Remediate hazardous conditions (if found).**

If contamination exceeding statutory requirements is found, prepare and implement soils and/or groundwater remediation plans to address conditions identified in the comprehensive hazardous materials investigation.

### **Measure P1c. If hazardous conditions cannot be remediated, refine land use plan to avoid adverse effects of contamination (if any).**

Utilize the information provided in completing a comprehensive hazardous materials investigation (Mitigation P1a) to refine the land use plan included in any specific plan proposed for the site. If the completed hazardous materials investigation reveals that irreparable contamination exists, any development plan for the study area should avoid development in the affected area(s).

The implementation of Measures P1a through P1c would reduce impacts relating to existing hazardous materials to a less-than-significant level.

**Impact P2.** Potential adverse effects on residents and workers of possible future soil and water contamination.

Compliance with existing Federal and State regulations and with the policies and programs set forth in the Pleasanton General Plan should minimize the risk of future contamination resulting from land use activities on the site. The potential for soil and water contamination relating to application of fertilizers, pesticides and other substances as a part of golf course and open space management is addressed in Chapter 5, Part C (Water). Mitigation measure C5b requires the preparation of a golf course management plan to mitigate this impact with respect to golf course operation.

**Measure P2. Prepare a Golf Course Management Plan.**

Same as Measure C4b.

The implementation of Measure P2 would reduce impacts relating to future use of fertilizers, pesticides, and other substances for golf course management to a less-than-significant level.

**4. Summary Comparison of Impacts and Mitigated Impacts:  
Public Health and Safety**

	Cooperative Plan	Preferred Plan (Alternative 1)
<b>Impact P1.</b> <b>Introduction of residents and workers into an area affected by existing contamination (if any).</b>	S/LS	S/LS
<b>Impact P2.</b> <b>Potential adverse effects on residents and workers of possible future soil and water contamination.</b>	S/LS	S/LS

Key: \*/\*: significance before mitigation/significance after mitigation.  
 S: significant (C): contributes to cumulative impact  
 LS: less than significant n.a.: impact does not apply to this alternative  
 \* no mitigation required ND: not determinable  
 † Less than significant before mitigation, but contributes to cumulatively significant impact.  
 NM: no mitigation possible (beyond policies, programs, and other regulations already in place).



## Q. GEOLOGY, SOILS, AND SEISMIC SAFETY

### 1. Setting

The following description of geology and seismic conditions draws heavily on the 1986 Pleasanton General Plan, the *Environmental Baseline Report*, the Specific Plan for the Bernal Property, and the County EIR (full citations in Chapter 9).

#### a. Geology

The project area is located in the southern part of the Amador Valley in the Diablo Range, part of the Coast Ranges Geomorphic Province of California. The Amador Valley is a northwest-trending valley bounded by belts of folded and faulted Mesozoic and Tertiary rocks, underlain by several hundred feet of sediments ranging in age from Plio-Pleistocene to Recent. Major faults, including the Calaveras and Greenville, and minor faults including the Amador, Las Positas, and the Livermore Valley faults have controlled the development of valleys in the region as shown in Figure 42.

In the project area vicinity, surficial and near-surface unconsolidated sediments consist of Holocene age (11,000 years or younger) fine sand, silt, and silty clay. These sediments were deposited by the principal stream, Arroyo de la Laguna, which traverses the western boundary of the project area.<sup>104</sup> These deposits are underlain by semi-consolidated Livermore gravels of Plio-Pleistocene age. The Livermore gravels also underlie the lower slopes of foothills west and east of the project area vicinity, and crop out on the low hills along the southern boundary of the project area.<sup>105</sup> The geology of the project area is shown in Figure 43. The Livermore gravels consist of rounded gravel cemented by an iron-rich sandy clay matrix.

#### b. Soil Conditions

Soils in the project area vicinity include the Pleasanton gravelly loam, the Positas gravelly loam, the Sunnyvale clay loam, the Sycamore silt loam, the Yolo loam, and the Zamora silt loam as shown in Figure 11 (p. 62).<sup>106</sup> The Sycamore and Sunnyvale soils cover most of the project areas. Yolo loam covers the northeastern parts of the Central Parcel. Pleasanton gravelly loam occurs in the West, Central, and East parcels. The southern and central parts of the East Parcel are covered by Positas gravelly loam which forms on low terraces. Table 50 (p. 309) lists some of the engineering characteristics of the soils identified at the project area. Most of the soils within the project area are considered to be prime agricultural soils, as shown on Figure 11 and discussed in Chapter 5, Part A (Land Use).

In western Alameda County, the Sycamore and Yolo soils have low strength, a low to moderate shrink-swell potential, and moderate to high permeability.<sup>107</sup> The Positas, Sunnyvale, and Zamora soils are described as having low strength, a high potential for shrink-swell, and a moderate to low permeability.<sup>108</sup>

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<sup>104</sup> "Geologic Map of the Late Cenozoic Deposits in Alameda County, California: USGS Miscellaneous Field Studies Map MF-429 Basic Data Contribution 48," E.J. Helley, K.E. Lajoie, and D.B. Burke, 1972.




<sup>105</sup> "Preliminary Geologic Map of the Dublin Quadrangle, Alameda and Contra Costa Counties, California," T.W. Dibblee, Jr., USGS Open File Report 80-537, 1980.

<sup>106</sup> *Soil Survey of Alameda County, California*, USDA, 1966.

<sup>107</sup> *Soil Survey of Alameda County, California, Western Part*, USDA, 1981.

<sup>108</sup> *Soil Survey of Alameda County, California*, USDA, 1966.



-  Active Fault Zone (a belt of intermittent fault traces)
-  Active Fault
-  Potentially Active or Activity Uncertain



Source: Alameda County Bernal Property Specific Plan EIR, Fig. 4.12-1  
based on California Division of Mines and Geology, 1988

Figure 42  
**Regional Faults**



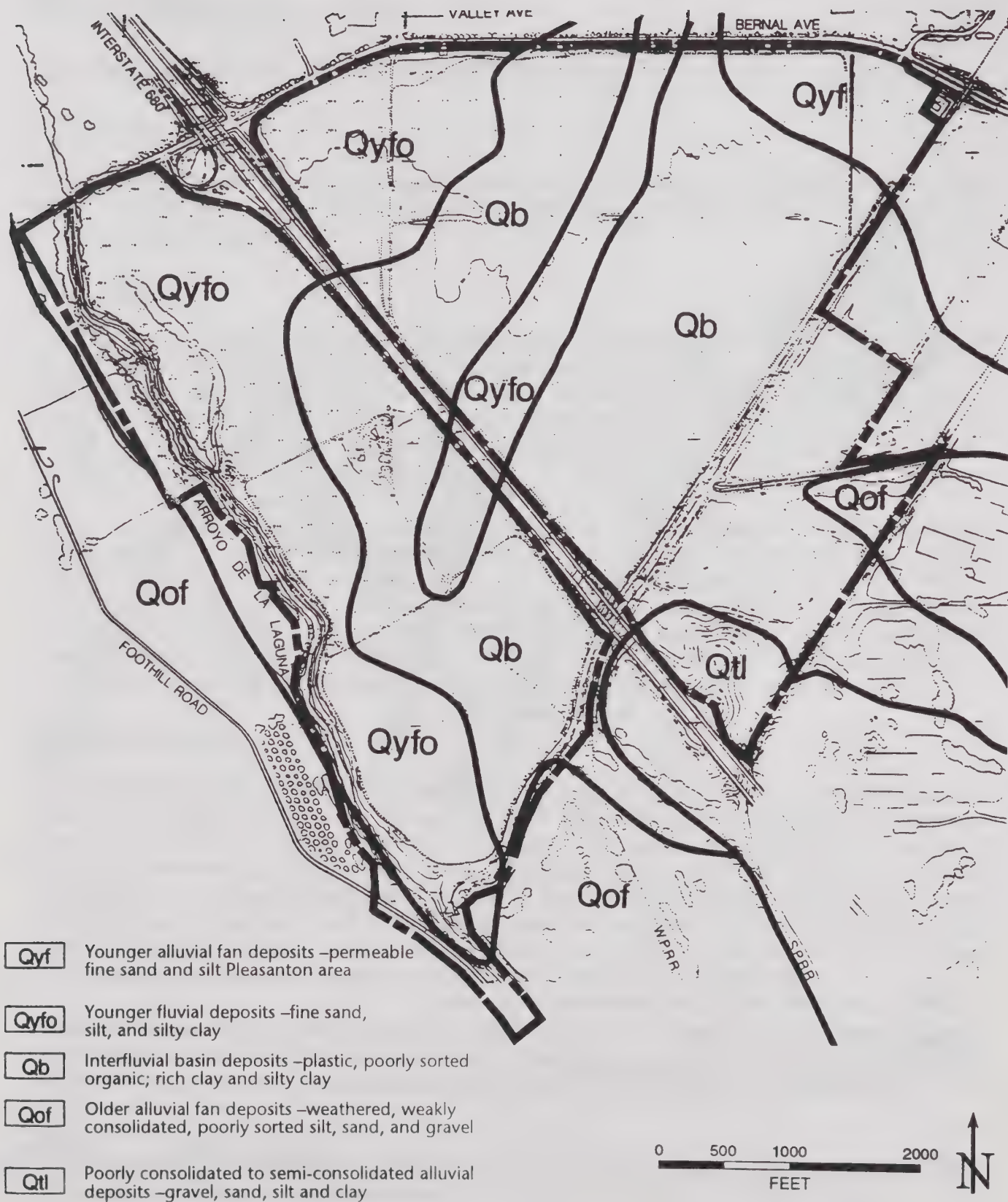


Figure 43

Source: Alameda County Bernal Property Specific Plan EIR, Fig.4.12-2  
based on Merrill Seeley, Mullen, Sandefur, Inc., 1986

**Geology**

**Table 50**  
**Engineering Characteristics of Site Soils**

Soil Symbol	Soil	Soil Thickness (in.)	Texture USDA (Unified)	Permeability (in/hr)	Permeability of Subsoil	Runoff Rate	Natural Drainage	Erosion Hazard	Available Water Holding Capacity	Shrink/Swell Potential	Atterberg Limits Liquid Limit	Plasticity Limit
PgB	Pleasanton gravelly loam (3-12% slopes)	72±	Gravelly silt loam (SC)	0.2 - 0.8	low	slow to medium	good	slight to moderate	moderate	low	20 - 40	10 - 20
PeC2	Positas gravelly loam (2-20% slopes) eroded	54±	Gravelly loam (ML-CL)	0.8 - 2.5	very low	slow to medium	good	slight to moderate	low	low	21 - 53	4 - 26
PeE2	Positas gravelly loam (20-40% slopes) eroded	54±	Clay (ML-CL)	<0.05	very low	rapid	good to somewhat excessive	severe	low	high	21 - 53	4 - 26
Sam	Sunnyvale clay loam over clay	66±	Silty clay (CH)	0.2 - 0.8	low	slow	poor	slight	very high	high	-	-
Sa	Sunnyvale clay	66±	Clay (CH)	0.05 - 0.2	low	slow	poor	slight	high	high	-	-
Se	Sycamore silt	60±	Silt loam	0.8 - 2.5	moderate to high	slow	moderately good	slight	high	low	20 - 35	N.P. - 10
YmA	Yolo loam (0-3% slopes)	60±	Fine sandy loam (CH)	0.8 - 2.5	moderate to high	very slow to slow	good	slight	high	low	20 - 40	N.P. - 20
Za	Zamora silt loam (0-4% slopes)	60±	Clay loam (CL)	0.2 - 0.8	moderate	slow	good	slight	high	moderate	-	-

Source: U.S. Department of Agriculture, Soils Conservation Service, Soil Survey Alameda Area, CA, March 1966

Natural drainage is generally good in all soils except the Sunnyvale series. Runoff rates and erosion hazards are generally low in all soils, except the Positas (forming on 20 to 40 degree slopes) where they are high. Fertility is moderate to high in all soils except the Positas gravelly loam. The area underlain by the more expansive Positas and Sunnyvale soils is coincident with a marshland depicted on maps published prior to the turn of the century.<sup>109,110</sup> This area is now mapped as an interfluvial basin underlain by organic-rich clay and silty clay.<sup>111</sup>

### c. Description of Seismic Hazards

The study area is located within the seismically active San Francisco East Bay area. There have been numerous earthquakes in the region throughout recorded history and significant earthquakes were generally associated with crustal movements along well-defined fault zones. Seismic risk can be attributed to ground shaking from earthquakes on active faults in the region. Ground shaking may, in turn, cause surface rupture, ground failure and seismically induced landslides and water waves.

**(1) Earthquakes.** Earthquakes occur when energy stored in the earth's crust is suddenly released along an area of weakness between two large masses of rock. The line where this area of weakness intersects the

<sup>109</sup> "Preliminary Geologic Evaluation of Surplus San Francisco Water Department Lands Parcels 5, 7 and 8, Pleasanton, CA," Merrill, Seeley, Mullen, Sandefur, Inc., unpublished consultant's report, June 1986.

<sup>110</sup> "Official and Historical Atlas Map of Alameda County, 1878," Thompson and West, 1878.

<sup>111</sup> "Geologic Map of the Late Cenozoic Deposits in Alameda County, California," Helley, Lajoie, and Burke, USGS Miscellaneous Field Studies Map MF-429 Basic Data Contribution 48, 1:62,500, 1972.



earth's surface is called a fault trace. The point on the fault plane where maximum energy is released is called the earthquake focus, and the point on the ground directly above this focus is called the epicenter.

(a) *Measuring Earthquakes.* The severity of an earthquake is commonly expressed by reference to either or both of two measurement systems. The Richter scale, which indicates the magnitude of an earthquake, is a standard measure of the amplitude of the seismic waves at a distance of 100 kilometers (63 miles) from the epicenter. That scale is logarithmic; therefore, for example, an earthquake that measures 4.0 on the Richter scale is 10 times stronger than an earthquake that measures 3.0. The Loma Prieta earthquake of October 1989 measured 7.1 on the Richter scale, while the January 1994 Northridge earthquake in Los Angeles measured 6.7 and the January 1995 earthquake in Kobe, Japan measured 6.8.

A second system, the Modified Mercalli (MM) scale, measures the intensity of an earthquake. This measure is partly subjective, and is based on the effects of the earthquake on man-made structures, the local population and topography. For example, an earthquake that measures III on the Modified Mercalli scale is "felt quite noticeably indoors, especially on the upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibration like passing of truck." An earthquake that measures VI on the MM scale is "felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight." Finally, an earthquake measuring X on the MM scale will result in "some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed over banks." The Modified Mercalli scale has a highest rating of XII ("damage total . . .").

The Pleasanton General Plan provides a table that describes Richter and Modified Mercalli earthquake measurements (Table V-1, p. V-24).

The earthquake fault zone extends for 500 feet in width on either side of an identified fault trace of major active faults and 200 to 300 feet in width on either side of a minor fault, as designated by the State. Development of a building for human occupancy is generally restricted within 50 feet of an identified fault.

(b) *Earthquake Faults in the Pleasanton Area.* Northern California is characterized seismically by the presence of a number of active and potentially active faults. An active fault is classified by the California Division of Mines and Geology (CDMG) as one which has exhibited surface displacement within the past 11,000 years. A potentially active fault is classified by the CDMG as one which has exhibited movement within the past two to three million years, but is not proven by direct evidence to have moved within the past 11,000 years.

Faults in and near Pleasanton that are identified in the Pleasanton General Plan (Table V-2, p. V-26) are shown in Figure 42 (p. 307), and include:

- The San Andreas fault, which forms the boundary between the oceanic crust of the Pacific Plate and the continental crust of the North American Plate. This fault, which runs from Mexico to Cape Mendocino in northern California, is located 24 miles west of Pleasanton. The San Francisco earthquake of 1906 was located on this fault. An earthquake of the same magnitude as the 1906 event, which measured 8.3 on the Richter scale, is generally regarded as the maximum credible earthquake (MCE) in the Bay Area. If the epicenter of an MCE on the San Andreas fault were located due west of Pleasanton, strong shaking in the range of MM VII to MM VIII would be anticipated.

- The Calaveras fault, which extends from the San Andreas fault near Hollister to the vicinity of Danville. It passes through the Pleasanton planning area along Pleasanton Ridge, west of and parallel to Foothill Road. The Calaveras fault is considered to be the most significant active fault in the Pleasanton area. Relatively recent events on this fault include the 1979 Gilroy earthquake (5.8 on the Richter scale) and the 1984 Morgan Hill earthquake (6.2 on the Richter scale). The MCE on the Calaveras fault is estimated at 7.0. An event of this magnitude could result in ground shaking of intensity MM IX near the epicenter.
- The Hayward fault, which extends about 45 miles along the eastern boundary of the San Francisco Bay Plain, from the Calaveras fault east of San Jose to Richmond. The Hayward fault passes about nine miles southwest of Pleasanton at its nearest point. The MCE on this fault is estimated at 6.9, which could produce strong ground motion (MM VIII) in Pleasanton. According to the 1986 Pleasanton General Plan, the Hayward fault is the source of frequent small earthquakes (4.0 or less on the Richter scale) as well as a fault creep (see definition below, on p. 315) from Fremont through Berkeley and San Pablo (four to seven millimeters per year).
- The Greenville fault, which is an active fault that borders the Amador-Livermore Valley on the east. The 1986 Pleasanton General Plan notes that a segment of this fault about 11 miles northeast of Pleasanton was ruptured in the 1980 Livermore Valley earthquake sequence (events of 5.9 and 5.3 on the Richter scale). The maximum intensity of shaking in the Pleasanton area was MM VII, causing some local damage. The MCE for the Greenville fault has been estimated at 6.5 on the Richter scale, which would produce shaking on the order of MM VII to MM VIII.
- The Concord fault, which is located in Walnut Creek and Concord. The structural relationship of this fault to the others described above is unclear, but it could be part of a fault zone that also includes the Calaveras fault to the south and the Green Valley fault to the north. According to the 1986 Pleasanton General Plan, no major earthquakes have originated from the Concord fault. This fault is estimated to have an MCE of 6.3 on the Richter scale, which would have approximately the same effect on Pleasanton as the 1984 Morgan Hill earthquake.
- The Verona fault is mapped one mile southeast of the project site. According to the County EIR, the California Division of Mines and Geology (CDMG) classified this fault as active and included it within "Special Studies Zone" boundaries based on an interpretation of geologic features which suggested recent movement near the General Electric Corporation's Vallecitos Nuclear Center (4.5 miles to the south of the project area), while Merrill and Seeley (1984) concluded that the Verona fault "is not considered to be a serious risk to the Pleasanton planning area and should not be an important factor in evaluating seismic risk for non-critical structures." "
- The Pleasanton fault, located approximately 3.5 miles north of the site on the north side of I-580, is zoned as an active fault. In most areas, the fault is concealed beneath surficial sediments. The *Environmental Baseline Report* concludes that, because of the lack of seismic data for the Pleasanton fault (including precise location, seismic history and recency of faulting), "earthquake parameters cannot be determined and a relatively low seismic impact hazard in the region is suggested."

According to the Pleasanton General Plan, the history of earthquake activity along these faults together with the unstable nature of some of the surrounding soil types indicate the likelihood of a major earthquake with potentially devastating effects within the next 100 years.



Several other active or potentially active faults, including the Las Positas fault and the Parks fault, are also identified in the 1986 Pleasanton General Plan and the *Environmental Baseline Report*. The 1986 Pleasanton General Plan (p. V-6) states that these faults are not considered capable of producing large magnitude earthquakes or significant surface displacements. The 1996 General Plan does not mention these two faults.

c. **Earthquake History.** Historic earthquakes have occurred on the major faults in the region, and these faults can be expected to continue to be seismically active. Table 51 lists the seismic parameters of the nearby active faults in the project area region, including maximum credible earthquake magnitudes. A maximum credible earthquake is defined as the largest earthquake that is likely to be generated along an active fault zone as determined from the geologic character and earthquake history of the fault. Three of these faults – the Hayward, Calaveras, and Concord – exhibit active fault creep, which is a slow but measurable surface movement of approximately several millimeters per year.<sup>112,113</sup> Geologic and seismologic studies suggest that major earthquakes occurring in the region are a result of right lateral displacement. Several miles of displacement have occurred on the Hayward and Calaveras faults over the last five to ten million years.

**Table 51**  
**Summary of Seismic Parameters of Significant Active Faults**  
**in the Project Area Region**

Fault	Distance from Project Area <sup>1</sup>	Maximum Fault Length	Maximum Historic Earthquake	Maximum Credible Earthquake <sup>2</sup>
Concord/Calaveras	0.5 miles	175 miles	6.1 <sup>3</sup>	7.0
Hayward	7.5 miles	175 miles	6.8 <sup>4</sup>	7.0
San Andreas	26 miles	750 miles	8.3 <sup>3</sup>	8.3
Greenville	10 miles	125 miles	6.5 <sup>3</sup>	6.5

<sup>1</sup> The 1996 Pleasanton General Plan shows the following distances from Pleasanton: Concord, 20 miles; Calaveras, 0 miles; Hayward, 9 miles; San Andreas, 24 miles; and Greenville, 11 miles.

<sup>2</sup> Richter magnitude.

<sup>3</sup> Instrumental determination. The 1996 Pleasanton General Plan notes that an earthquake with magnitude 6.2 occurred in April 1984 ("the Morgan Hill earthquake").

<sup>4</sup> Estimated from felt intensity data.

Source: Merrill, Seeley, Mullen, Sandefur, Inc. (1986a)

<sup>112</sup> *Slip on the Hayward and Calaveras Faults Determined from Offset Powerlines*, R.O. Burford, and R.V. Sharp, California Division of Mines and Geology Special Publication 62, 1982, pg. 261-269.

<sup>113</sup> "Alignment-Array Measurements of Fault Slip in the Eastern San Francisco Bay Area, California," P.W. Harsh, and R.O. Burford, in *Proceedings, Conference of Earthquake Hazards in the Eastern San Francisco Bay Area*, E.W. Hart, S.E. Hirschfield, and S.S. Schulz, eds., 1982, pg. 251-260.

Numerous earthquakes with magnitudes of 5.8 or greater have been recorded since 1850.<sup>114</sup> The most important of these historic earthquakes to affect the project area vicinity include the 1906 San Francisco earthquake, the 1868 Hayward earthquake, the 1961 earthquake near Danville, and the 1980 Livermore earthquake swarm.

The 1906 San Francisco earthquake generated a Richter magnitude of 8.3<sup>115</sup>, with a maximum intensity of IX to X on the Modified Mercalli (MM) scale. Such intensities occur in areas underlain by loose fill and poorly consolidated sediments around the margins of the San Francisco Bay. In the Livermore valley (east of Amador Valley), intensity VIII earthquakes have occurred in alluvium, while intensity VII earthquakes have occurred in the surrounding uplands. No information is available on intensities at the project area itself.<sup>116</sup>

The 1868 Hayward Earthquake resulted in a 30-mile rupture of the Hayward fault in western Alameda County. Although no instrumental magnitude data are available on the earthquake, a Richter magnitude of 6.8 was a reasonable estimate based on Modified Mercalli intensities of VII to VIII in the project area vicinity.<sup>117</sup>

The 1961 earthquake near Danville has been attributed to movement of the Calaveras fault based on the presence of fissures near the fault trace.<sup>118</sup> Based on intensities of VII, a magnitude of 5.5 or 6.0 was estimated for this earthquake.<sup>119</sup> Two recent earthquakes that have definitely been attributed to the Calaveras fault are the August 6, 1979, Coyote Lake Earthquake (magnitude 6.0) and the April 24, 1984, Morgan Hill Earthquake (magnitude 6.2); both, however, were located a considerable distance south of the project area, and, therefore, only mild shaking affected the project area vicinity.

The 1980 Livermore earthquakes (main shock and aftershocks) occurred in an area of little recorded seismicity.<sup>120</sup> The main shock was recorded at magnitude 5.9, and occurred along the Greenville fault. Several kilometers of surface rupture resulted from the earthquake, causing localized damage primarily in the eastern part of the Livermore Valley.

**(2) Surface Rupture.** Also known as surface faulting, surface rupture is the fracture of soil or rock on the earth's surface. In the Pleasanton area, surface rupture could occur along the Calaveras fault. According to the 1986 Pleasanton General Plan, an earthquake of magnitude 7.0 with an epicenter in or near Pleasanton could produce several feet of horizontal surface displacement along the main fault trace.

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<sup>114</sup> *Area Damaged by the 1868 Hayward Earthquake and Recurrence of Damaging Earthquakes Near Hayward*, T.R. Topozada, and D.L. Parke, CDMG Special Report 57, 1982, pg. 39-48; *Seismic History of San Francisco Region*, D. Tocher, CDMG Special Report 57, 1959, pg. 39-48.

<sup>115</sup> Earthquake magnitude: values according to the Richter Scale, which is a logarithmic scale developed by Charles Richter to measure earthquake magnitude by the energy released, as opposed to earthquake intensity as determined by effects on people, structures and earth material.

<sup>116</sup> Merrill, Seeley, Mullen, Sandefur, Inc., 1986.

<sup>117</sup> Topozada and Parke, 1982, pg. 39-48.

<sup>118</sup> "Map of Quaternary Faulting Along the Northern Calaveras Fault Zone, Las Trampas Ridge, Diablo, Dublin, Niles and La Costa 7.5 Minute Quadrangles, California," D.B. Herd, USGS Open File Report 78-307, 1:24,000, 1978.

<sup>119</sup> *Preparation of Isoseismal Maps and Summaries of Reported Effects for Pre-1900 California Earthquakes*, T.R. Topozada, C.R. Real, and D.L. Parke, CDMG Open File Report 81-IISAC, 1981.

<sup>120</sup> *Seismicity and Active Faults in the Eastern San Francisco Bay Region*, W.L. Ellsworth, J.A. Olson, L.N. Shijo, and S. Marks, MCDMG Special Publication 62, 1982, pg. 83-92.



**(3) Ground Shaking.** Ground shaking is the complex wave motion produced by the passage of seismic waves through the earth's outer crust. The intensity of ground shaking (which is measured by the Modified Mercalli scale, described above) at a given location is determined by distance from the epicenter, magnitude and duration of the earthquake, and local soil, geologic and ground water conditions. Ground shaking generated by earthquakes causes far more damage over a wider area than does surface fault rupture. Within the same region, ground shaking tends to be more severe in areas underlain by unconsolidated deposits (fills), such as the Amador Valley, than areas underlain by bedrock.

**(4) Ground Failure.** Ground failure includes landslides, lateral spreading, liquefaction, lurch cracking, stream and canal bank failures, rock falls, and differential settlement of the ground surface not directly attributable to the other types of ground failure events. The Pleasanton General Plan (p. V-2) notes that the potential for ground failure is greatly increased if an earthquake occurs during a period of heavy rainfall, when hillslopes are saturated or when the groundwater table is nearer the surface. Several of the specific types of ground failures listed here are described in more detail below.

**(5) Landslides.** Earthquakes can cause landslides by shaking unstable rock and soils. Pleasanton Ridge and the area of low hills to the south of Pleasanton, including the knoll in the EIR study area, are landslide-prone areas.<sup>121</sup>

**(6) Lateral Spreading.** Lateral spreading is the lateral movement of soil on top of liquefied granular or sandy soils toward a free face, such as a stream bank, cut slope or artificial fill slope. It is generally induced by strong seismic shaking of long duration, and its effects are most pronounced when the water table is high. Lateral spreading can cause severe cracking and differential displacement of the ground surface for distances of up to several hundred feet. The entire study area is subject to lateral spreading (the Pleasanton General Plan, Figures V-2 and V-4). The most susceptible locations in the EIR study area are considered to be zones up to a few hundred feet wide along Arroyo de la Laguna, where surface materials consist of young alluvial and fluvial deposits underlain by a very thick sedimentary sequence. The potential for lateral spreading is greatly increased during or after periods of heavy rainfall, when water tables are closer to the surface and the ground is generally more saturated.

**(7) Liquefaction.** Liquefaction occurs when groundwater is forced up into granular surface soils, creating a kind of quicksand and thus causing the soil to lose strength and behave like a liquid. The potential for liquefaction is greatest in the presence of a high water table and clean, well-sorted sands. Liquefaction can occur on level surfaces, causing differential settlement and cracking of the ground surface due to the withdrawal of surface materials. The *Environmental Baseline Report* infers from another source (Merrill and Seeley, Inc., 1985) a relatively high liquefaction potential in the area of the study area, with the western portion more susceptible than the eastern portion. This inference is supported by the Pleasanton General Plan (Figures V-2 and V-4).

**(8) Lurch Cracking.** Lurch cracks are random cracks and fissures in the soil induced by strong seismic shaking. They may be related to lateral spreading and liquefaction; they may also be produced when the amplitudes of the seismic waves that deform alluvium are so great that permanent deformation and cracking of the ground surface occurs. Lurch cracks may form at the contact between unconsolidated and consolidated deposits along the margins of a valley. The study area is considered to have moderate to high susceptibility to lurch cracking (the Pleasanton General Plan, Figures V-2 and V-4).

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<sup>121</sup> As shown in Figure 43, the geology of the knoll is characterized by poorly alluviated to semi-consolidated alluvial deposits (gravel, sand, silt, and clay). This condition is considered subject to landsliding.

**(9) Differential Settlement of the Ground Surface.** Differential settlement is the downward movement of soil caused by a shift in the underlying sediments, which results in a depression in the soil surface. Differential settlement often occurs in areas affected by liquefaction or lateral spreading. According to the 1986 Pleasanton General Plan, “the potential for seismically induced differential settlement cannot be evaluated at a specific site (even by relatively detailed geologic studies), since ground surface settlement might occur over a very large area that exceeds the boundaries of a specific site” (p. V-9). The Plan estimates high potential for differential settlement in the study area.

**(10) Water Waves.** Earthquake-induced water waves, or seiches, may result from ground shaking. In the greater Pleasanton area, the only potential source of water waves is Del Valle Reservoir, which is considered to have a remote chance of being the site of a seiche that could affect the Pleasanton planning area.

**(11) Fault Creep.** Fault creep is a slow, continuous displacement along a fault, not accompanied by noticeable earthquakes. The 1986 Pleasanton General Plan notes that fault creep is occurring along the Hayward and Concord faults and along segments of the Calaveras fault south of Sunol, but not along the “seismically quiet” segment of the Calaveras fault north of Sunol.

#### **d. State Laws Applicable to Seismic Risks**

The Alquist-Priolo Hazard Zones Act, enacted in 1972, requires the establishment of “special studies zones” along known active faults and regulation by cities and counties of development within these zones. In general, structures for human occupancy are not allowed to be built across the mapped trace of an active fault or within 50 feet on either side of the fault trace. In addition, a zone 1/8 mile (660 feet) on either side of a mapped trace requires a geologic investigation prior to construction within the zone. The special study zone for the Calaveras fault does not intrude into the study area, and no other special study zones have been identified in the vicinity of the study area.

## **2. Impacts**

### **a. Impacts of the Cooperative Plan and the Preferred Plan**

**(1) Geologic Hazards and Seismic Risk.** The Cooperative Plan and the Preferred Plan would permit new construction in the study area, subject to the policies and programs of the Pleasanton General Plan. Because development is limited to the relatively flat portions of the study area, the new construction would cause no increase in the potential for landslides in the southerly hills. Structures in the level area would, however, be subject to the types of earthquake-related hazards described in the Setting section, above. Table 52 summarizes the specific types of hazards, and the potential level of impact, that are estimated to apply to the study area.

In the worst case, these impacts could cause damage to and, possibly, the collapse of structures, which in turn could injure or kill residents, workers and other people in the area.



**Table 52**  
**Types of Earthquake-related Impacts and Estimated Levels of Impact**

Type of Impact	Estimated Level of Impact
Seismic shaking	High
Lateral Spreading	Moderate to High
Differential Settlement	Moderate to High
Lurch Cracking	Moderate to High
Liquefaction	Moderate to High
Surface Fault Rupture	Nil to Low
Bank Failures	Moderate
Flooding	Nil to Low
Erosion	Low to High
Rock Falls	Low to Moderate
Landslides	Low to High
Expansive Soils	Moderate to High

Source. The Pleasanton General Plan, Figures V-2 (p. V-34) and V-4 (p. V-35). Estimated levels of impact are for zones A1, A0 and L, which are located in the study area. Note that all of these zones extend beyond the study area; therefore, some of the impact levels indicated in this table may not apply specifically to the study area.

**Impact Q1. Introduction of structures and population into an area in which the likelihood of impacts from seismic events is high.**

Development would be subject to the policies and programs of the Pleasanton General Plan.

**(2) Grading.** The mass site grading plan for the Cooperative Plan approaches balance on the Central Parcel, but requires substantial material transfer from the East Parcel to the West Parcel. Table 53 presents these estimates, which correspond to an imbalance of approximately 90,100 cubic yards which would have to be imported from offsite or gleaned from additional cut from onsite. Refinements of the grading plan could require less fill material rather than imports or greater cuts.

The details indicate that the golf course water feature, at 98,000 cubic yards (cy), provides about the amount of fill needed to construct the sound berms (90,000 cy). The rest of the earth movement is land contouring and, on the West Parcel, increasing the elevation of residential sites (described in Chapter 4, Option 4). Generally, material from the knoll would be exported to fill the West Parcel. The knoll contains approximately 1,235,000 cy of material, of which approximately one-third would be excavated. Without this source of material, import of fill from offsite could be required, other areas of the site would be cut, or cut more, to gain additional fill, or modifications to the plan would be required to reduce the need for fill. Other adjustments in the site plan may also increase fill requirements.

**Table 53**  
**Soils Transfer Estimates Associated with Cooperative Plan Grading**

Site Location		Cut and Fill (cubic yards/cy)		Total Soils Movement (– = cut; + = fill)			
		Cut	Fill	Mass Grading	Sound Berms	Water Feature	Knoll
West Parcel	mass grading	125,000	564,000	+439,000			
	sound berms	0	35,000		+35,000		
	subtotal	125,000	599,000			n.a.	n.a.
Central Parcel	mass grading	191,500	254,200	+62,700			
	sound berms	0	30,000		+30,000		
	water feature	98,000	0			–98,000	
	subtotal	289,500	284,200				n.a.
East Parcel	mass grading	158,500	73,100	–85,400			
	sound berms	0	25,000		+25,000		
	knoll	376,300	58,100				–318,200
	subtotal	534,800	126,200			n.a.	
Site Total		949,600	1,039,400	+416,300	+90,000	–98,000	–318,200

Note: Estimates of cut and fill volumes are gross approximations; detail does not agree with total in some cases.

Source: Scott Gregory, Lamphier & Associates, Memorandum to Mundie & Associates, November 1, 1996, p. 4

In the Preferred Plan, the knoll would remain intact; the West Parcel is unlikely to be filled over its entire area; the sound berm on the west side of I-680 is the same as in the Cooperative Plan; the sound berm on the east side of I-680 may require more fill than in the Cooperative Plan, because it is integrated into the golf course; and the water feature is similar to the water feature in the Cooperative Plan (although it may be larger, because the golf course is larger). If Valley Avenue is configured as an undercrossing across the Union Pacific Railroad tracks, then the excavation would provide a source of fill material. This plan requires no import of fill from offsite.

In the Preferred Plan, the landform grading for the golf course may be adjusted to compensate for any imbalance between cut and fill material. Because the knoll would not be graded, the Preferred Plan is considered less likely to require movement of cut material from the East Parcel to the Central or West Parcel. Any grading to flatten the site would be accommodated within the West Parcel or, if fill on the West or Central Parcel is required from beyond the East Parcel, it could be moved through the Valley Avenue undercrossing (if this configuration is selected).

Although both the Cooperative Plan and the Preferred Plan both involve substantial amounts of grading, the earth movement that would occur would not result in the creation of steeper slopes (except on the knoll in the Cooperative Plan, where the graded slope would be 3:1) or other large cuts/fills that would lead to problems commonly associated with grading for hillside development. In sum, the grading in both plans be characterized by contour grading and thin, engineered fills.

The movement of earth for the project creates the potential for adverse impacts related to the effects of construction traffic on general traffic conditions and on road conditions, and to the effects of dust from the fill material itself on air quality conditions. These impacts are also noted in Chapter 5, Part K (Air Quality).



**Impact Q2. Material transfer requirements of the grading program result in potential impacts on traffic, roads, and air quality during construction.**

### **b. Impacts of Alternative 2**

Potential impacts associated with development permitted by Alternative 2 would be similar in type to impacts associated with the Preferred Plan, but cut and fill estimates for this alternative have not been formulated. In this alternative, the knoll would not be graded (similar to the Preferred Plan). Grading would, however, be required to construct the water features that would be located on the site in lieu of the golf course, and this source of fill material could compensate for material not provided by the knoll as a fill source for proposed sound berms.

**Impact Q1. Introduction of structures and population into an area in which the likelihood of impacts from seismic events is high.**  
Same as for the Cooperative Plan and Preferred Plan.

**Impact Q2. Material transfer requirements of the grading program result in potential impacts on traffic and air quality during construction.**  
Same as for the Cooperative Plan and Preferred Plan.

### **c. Impacts of Alternative 3**

The impacts of Alternative 3 are discussed in the County EIR Chapter 4.12.

## **3. Mitigation Measures**

**Impact Q1. Introduction of structures and population into an area in which the likelihood of impacts from seismic events is high.**

**Measure Q1: None.**  
This impact cannot be mitigated if development of the project occurs.

Any plan for the development of the study area must conform to the policies and programs of the Pleasanton General Plan, and any development that occurs in the area must conform to the Uniform Building Code and other applicable state and local seismic safety regulations. These requirements, which are existing law, are intended to mitigate potential risk to development from seismic events to the maximum extent feasible based on current knowledge and technology.

Even with complete compliance with seismic safety policies and requirements, seismic risk to property and human life remains that cannot be fully mitigated.

**Impact Q2.** Material transfer requirements of the grading program result in potential impacts on traffic, roads, and air quality during construction.

**Measure Q2a:** Prior to the issuance of any building, grading, or demolition permit, the applicant shall prepare for approval by the City of Pleasanton a Construction Phasing and Management Plan.

Same as Measure J8.

**Measure Q2b:** In the specific plan and as a condition of approval for development, require dust control during all phases of construction.

Same as Measure K1.

With the implementation of Measure Q2a and Q2b, construction period impacts on traffic, roads, and air quality would be reduced to a less-than-significant level.

#### 4. Summary Comparison of Impacts and Mitigated Impacts: Geology, Soils, and Seismic Safety

	Cooperative Plan	Preferred Plan (Alternative 1)
<b>Impact Q1.</b> Introduction of structures and population into an area in which the likelihood of impacts from seismic events is high.	S/S (NM)	S/S (NM)
<b>Impact Q2.</b> Material transfer requirements of the grading program result in potential impacts on traffic and air quality during construction.	S/LS	S/LS

Key: \*/\*: significance before mitigation/significance after mitigation.

S: significant

(C): contributes to cumulative impact

LS: less than significant

n.a.: impact does not apply to this alternative

\* no mitigation required

ND: not determinable

† Less than significant before mitigation, but contributes to cumulatively significant impact.

NM: no mitigation possible (beyond policies, programs, and other regulations already in place).



## **R. ENERGY**

### **1. Setting**

Pacific Gas & Electric Company (PG&E) supplies electricity and natural gas to the City of Pleasanton. According to the Pleasanton General Plan, electricity is transported to Pleasanton via 60 kilovolt (kv) transmission lines that run from the Radum substation near Stanley Boulevard along the Southern Pacific Railroad tracks and I-580 to the Camp Parks substation and on to San Ramon. An additional substation, located on Stanley Boulevard near Bernal Avenue, was built in the early 1990s to augment the existing facilities.

Natural gas is provided from a substation in Sunol, from which distribution feeder mains transport gas along Foothill and Pleasanton-Sunol Roads. Other distribution feeder mains are located along I-580, Santa Rita Road and Stanley Boulevard. The General Plan notes that PG&E projects improvements to its natural gas distribution system based on information provided by the city.

Because improvements to both the electric system and the gas distribution system are planned, the General Plan states that "Future service consistent with the General Plan is . . . provided by PG&E."

Beyond local regulation (Pleasanton General Plan goals and policies discussed in Chapter 6), the State of California establishes energy efficiency standards for buildings in Title 24 of the California Administrative Code. New commercial or residential space must comply with the provisions of Title 24, which pertain to lighting, heating, cooling, ventilation, water heating and insulation.

### **2. Impacts**

#### **a. Impacts of the Cooperative Plan and the Preferred Plan**

Energy impacts are anticipated during both construction and operation of development that would be permitted by the Cooperative Plan or the Preferred Plan, even though all new development must comply with the energy conservation policies of the General Plan and Title 24 of the California Administrative Code.

Construction of the permitted development will consume energy for the operation of construction equipment as well as travel to the construction site by construction workers and mobile equipment. Energy will be consumed during the operations phase, for example, for the heating and cooling of buildings, use of electrical equipment (ranging from elevators to coffeemakers) within those buildings, maintenance of buildings, grounds, public parks/open spaces and streets, travel by residents, workers and visitors. Given the range of uses permitted by the specific plan, it is reasonable to anticipate that energy use in the study area would not be significantly different from energy use by similar uses developed elsewhere in Pleasanton or in the remainder of the Tri-Valley area.

Because all development would have to comply with Title 24 and the Pleasanton General Plan, potential energy impacts are not considered significant.

#### **b. Impacts of Alternative 2**

Potential impacts associated with development permitted by Alternative 2 would be the same as impacts associated with the Cooperative Plan and the Preferred Plan.

**c. Impacts of Alternative 3**

The impacts of Alternative 3 are discussed in the County EIR Chapter 4.10.

**3. Mitigation Measures**

No mitigation measures are required.



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## CHAPTER 6

### CONSISTENCY WITH LOCAL PLANNING

The specific plan, development plan, and development agreement for the SFWD Bernal Avenue property will be guided by existing local plans and policies as well as applicable county, state, and federal laws and regulations.

This chapter contains two parts. The first (Part 6-1) discusses the consistency of the proposed project with key provisions of the Pleasanton General Plan. The second (Part 6-2) discusses the project's consistency with key components of other agencies' plans.

Consistency with the General Plan does not necessarily indicate absence of a significant environmental impact, nor does inconsistency necessarily indicate the presence of a significant impact. The evaluation of General Plan consistency is intended to provide perspective on whether a proposed plan or project fits into the framework of goals and policies that a community has adopted to guide its future growth and development.

#### 6-1. PLEASANTON GENERAL PLAN

The discussion of consistency with the Pleasanton General Plan is organized according to EIR topic, with topics presented in the same order as in Chapter 5. Table 54 provides an index of the topics that include substantive discussion of specific elements of the General Plan.

##### A. Land Use

##### 1. Planning for the Project Area

The study area is contained within Pleasanton's planning area as shown in Figure I-2 of the City's General Plan, which designates the study area, along with five other areas, for the preparation of a specific plan (Figure II-6, p. II-40). A specific plan is described by the General Plan as "a set of land use, density, transportation, public facility and open space standards which clarify the application of General Plan policies for a particular area" (General Plan, p. II-23). Properties lying within the boundaries of a specific plan area are subject to the land uses, densities, public improvements and other requirements specified in the specific plan prepared for that area. The General Plan map indications of land uses and densities are conceptual only and may change subject to the outcome of the specific plan (General Plan, p. II-7).

The preparation of a specific plan for the project area fulfills this requirement of the General Plan.

The General Plan also contains goals, policies, and programs that are intended to assure that new land uses within the Pleasanton Planning Area develop "in an efficient, logical, and orderly fashion" (Land Use Goal 2). To achieve this goal, the Plan includes the following Land Use policies and programs:

- Policy 16: Annex urbanized pockets of unincorporated land adjacent to the City limits in areas where landowners are willing to accept City services and development standards.



**Table 54**  
**Where General Plan Elements are Discussed in Chapter 6**

EIR Subject	General Plan Element										
	II. Land Use	III. Circulation	IV. Housing	V. Public Safety	VI. Public Facilities	VII. Conservation and Open Space	VIII. Noise	IX. Air Quality	X. Community Character	XI. Economic & Fiscal	XII. Subregional Planning
A. Land Use	✓		✓								
B. Drainage											
C. Water											
D. Wastewater											
E. Education											
F. Police											
G. Fire											
H. Parks/ Community Services					✓	✓					
I. Libraries											
J. Transportation		✓									
K. Air Quality								✓			
L. Noise							✓				
M. Cultural Resources						✓					
N. Visual Resources						✓			✓		
O. Biology						✓					
P. Public Health & Safety				✓							
Q. Geology/Soils/ Seismic Risk				✓							
R. Energy			✓								

- Policy 17:** Encourage development in locations which would complete or install planned public facility systems.

The Subregional Planning Element (Chapter XII) of the General Plan also expresses the City's desire to "achieve a coordinated, efficient, and environmentally-sensitive pattern of development in the Tri-Valley area." It includes the following policy and program:

- Policy 1:** Ensure that new development occurs in a compact community-centered pattern which supports existing communities, improves mobility, minimizes public infrastructure costs, protects natural resources, and supports economic activity.

- Program 1.3:** Encourage all development within the Tri-Valley to take place within cities. . .

Annexation of the unincorporated areas covered by the specific plan are a part of the proposed project (Land Use Policy 16 and Subregional Planning Policy 1). Development on this site would be consistent with City plans for public facility systems (Land Use Policy 17).

## **2. Types of Development**

Pleasanton's General Plan map provides direction for the types of land uses suitable for the study area: residential (medium and high density); commercial and offices (in the designation titled "Commercial and Office"); open space (in the designations "Parks and Recreation" and "Public Health and Safety"); and public and institutional (in the designations "Public and Institutional" and "Schools"). General Plan descriptions of these land use types are presented in Table 55.

The Land Use Element of the General Plan contains the following policies and programs intended to "achieve and maintain a complete well-rounded community of desirable neighborhoods, a strong employment base, and a variety of community facilities" (Goal 1):

- Policy 2:** Develop new housing in infill and peripheral areas which is adjacent to existing residential development.

- Program 2.1:** Zone vacant infill sites at densities to encourage development while respecting the character of surrounding uses.

- Policy 4:** Ensure that neighborhood, community, and regional commercial centers provide goods and services needed by residents and businesses of Pleasanton and its market area.

- Program 4.1:** Zone sufficient land for neighborhood, community, and regional commercial uses to support Pleasanton's increasing business activity.

- Policy 5:** Provide adequate neighborhood commercial acreage to serve the future needs of each neighborhood at buildout.

- Program 5.1:** Locate appropriately scaled commercial centers with reasonable access to the residential neighborhoods they serve.

- Policy 6:** Encourage industrial, commercial, and office development which is compatible with environmental constraints in Pleasanton.

- Program 6.5:** Require non-residential projects to provide a landscape buffer between new non-residential development and areas designated for residential use.



**Table 55**  
**Land Use Types Suitable to Specific Plan Area**

Land Use	Description	Intensity of Land Use
Residential	Medium Density: 2 to 8 dwelling units per gross acre	Predominantly detached single-family homes; also including townhomes and condominiums*
	High Density: 8+ dwelling units per gross acre	Attached single-family homes, townhomes and condominiums*
Commercial	Commercial and offices (retail, highway and service commercial; business and professional offices)	Floor area ratio not exceeding 0.6
Parks and Open Space	Parks and recreation; flood control and drainage corridors; natural open space	No significant development
Community Facilities	Future school	Intensity not specified
	Public and institutional (includes City Hall, post offices, churches, cemeteries, hospitals, community centers, corporation yards, sewage treatment facilities, and utility substations.)	Intensity not specified
Transportation	I-680 and UPRR tracks	To remain in current transportation use
	City thoroughfares and other streets	Circulation use appropriate to capacity
	County transportation corridor	To be available for use as regional trail (Chapter 5, Part H) and excursion rail service (Chapter 2)

\* These descriptions are for general information only. The General Plan states (p. II-5), "Any housing type (detached and attached single family homes, duplexes, townhouses, condominiums, and apartments) . . . may be allowed in any of the residential designations provided that all requirements of the Zoning Ordinance are met."

Source: Pleasanton General Plan Map and General Plan Text, Chapter II

**Policy 8:** Provide a diversity of community facilities to maintain and improve service levels for existing and future residents.

**Program 8.1:** Review and condition future developments to pay their fair share of future community facilities and sites.

**Program 8.2:** Cooperate with the School District to enhance the quality of education, anticipate and construct school facilities as they become needed, and maximize joint use of school buildings and City parks and playgrounds.

**Policy 9:** Provide each major residential area with high quality neighborhood facilities including an elementary school, park, and other amenities.

**Program 9.1:** Adopt specific plans for developing large landholdings to identify facility needs and establish development guidelines.

**Policy 13:** Integrate land use and transportation planning in order to ensure patterns that facilitate safe and convenient mobility of people and goods at a reasonable cost, and to increase travel alternatives to the single-occupant vehicle.

- Program 13.1: Locate employment, residential, and service activities close together, and plan development so it is easily accessible by transit, bicycle, and on foot.
- Program 13.2: Encourage reuse of vacant/underutilized parcels.
- Program 13.4: Promote pedestrian-oriented mixed-use centers.
- Program 13.5: Permit higher residential and commercial densities near transportation corridors.
- Program 13.7: Use design features in new development . . . to encourage transit, bicycle, and pedestrian access.
- Program 13.8: Encourage employment and neighborhood shopping in or near residential areas.

The Cooperative Plan and the Preferred Plan generally conform to these policies and programs, by providing for a mixed-use development on an infill site, with appropriate buffering between dissimilar land uses and a trail system to encourage alternative modes of travel.

### **3. Amount of Development**

The Pleasanton General Plan, adopted August 6, 1996, assumes that the SFWD Bernal Property (which forms the bulk of the specific plan area) would be developed as permitted in the previous (1986) General Plan.<sup>122</sup>

- **Residential use:** The current and previous General Plans permit a range of medium and high density housing units. For planning purposes, a mid-range of 2,257 units was used in projecting cumulative effects. (The 1996 General Plan references this figure on p. II-11.)

Residential lands under either the Cooperative Plan or the Preferred Plan would accommodate up to 1,900 units.

- **Commercial use:** The current and previous General Plans permit a range of development. For planning purposes, development of up to approximately 944,800 square feet of commercial building space was assumed.

The Cooperative Plan would provide up to 577,000 square feet of commercial building space on a total of 51 acres of land, 20 acres of land designated Village Commercial (retail) and 31 acres designated Commercial Office.

The Preferred Plan would provide the same amount of commercial building space (577,000 square feet) on about 35 acres (the 21 acres designated Village Commercial plus the 13.4 acres designated Commercial Office). It would allow up to 5,000 square feet of additional commercial/office use on the West Parcel.

The Cooperative Plan and the Preferred Plan have the same basic residential development potential, lower than assumed in the General Plan. They have the same basic commercial development potential (in terms of built space, which is also lower than assumed in the General Plan). In both cases, the density of allowed development would be markedly less than that identified with the site in the 1986 General Plan and assumed for planning purposes in the 1996 General Plan. In both cases, the specific plan would be brought

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<sup>122</sup> City of Pleasanton, General Plan EIR, DEIR Tables 2 and 3 (pp. 19 and 21).



under Pleasanton's on-going growth management program according to specific provisions contained in the Cooperative Plan Agreement (presented in Appendix B).

The difference between General Plan development assumptions for the site and the development levels proposed under the specific plan is not judged to result in an inconsistency with the General Plan because:

- (1) The General Plan did not specify maximum or minimum development levels for sites, which were to be determined as part of a specific plan process. The set of city actions this EIR addresses is consistent with that general plan direction.
- (2) The densities identified with the site in the 1986 General Plan and assumed for planning purposes in the 1996 General Plan involved higher-intensity building types, which would be less compatible than the Cooperative or Preferred Plan with adjacent development. Reducing the amount of development from the amount used for General Plan planning purposes does not alter the character or amount of site development by an amount great enough to conflict with other land use policies, such as those concerning jobs/housing balance, parks, and schools. (Consistency with housing goals and policies in particular is discussed in the next paragraph.)

#### **4. Housing**

Pleasanton is required "to help meet the State goal of attaining decent housing and a suitable living environment for every California family."<sup>123</sup> Among other requirements, the Housing Element of each city's General Plan must make adequate provision for the existing and projected needs of all economic segments of the community, in part by identifying adequate sites for housing of all types.

The Housing Element (Chapter IV) of the 1996 General Plan describes Pleasanton's approach to meeting these requirements. It includes the following goals, policies and programs:

- Goal 1: Attain a variety of housing sizes, types densities, designs, and prices which meet the existing and projected needs of all economic segments of the community.
- Policy 1: Maintain that at least 25 percent of the total housing stock at full development shall be multiple-family, both owner- and renter-occupied.
- Program 1.1: Ensure that at least 25 percent of all residential development permits are allocated to multiple-family housing through the City's Growth Management Program as long as level-of-service standards and other City policies are maintained.
- Policy 3: Stimulate development of single-family housing units on lots of 20,000 square feet and greater.
- Policy 4: Permit mobile homes and factory-built housing on appropriately located sites.
- Program 4.1: Permit mobile homes and factory-built housing projects which have permanent foundations and meet all zoning and design review requirements on any parcel designated Rural, Low, Medium, or High Density Residential.
- Policy 5: Encourage at least 50 percent of multiple-family housing units to be rental apartments at buildout.

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<sup>123</sup> *Pleasanton General Plan, 1996, Housing Element, p. IV-1.*

**Goal 4:** To provide adequate locations for housing of all types.

**Policy 17:** Disperse high-density housing throughout the community, especially in areas near public transit, major thoroughfares, shopping, and employment centers.

**Program 17.1:** Provide sites for multi-family housing, especially in locations near existing and planned transportation and other services.

**Policy 18:** Permit residential infill in areas where public facilities are adequate to support such development.

**Program 18.1:** Zone infill sites at densities compatible with infrastructure capacity and General Plan Map designations.

**Program 18.3:** Encourage mixed-use developments that combine residential uses with compatible commercial uses.

**Policy 7:** Encourage the construction of housing affordable to lower-income households consistent with regional share goals and income levels of current and future Pleasanton residents and workers.

**Program 7.7:** Encourage inclusion of lower-income housing units in market-rate projects.

**Policy 8:** Encourage the construction of housing affordable to moderate-income households consistent with regional share goals and income levels of current and future Pleasanton residents and workers.

**Policy 9:** Strive toward meeting Pleasanton's share of regional housing needs.

**Program 9.1:** Use the City's zoning ordinance to designate sufficient land at appropriate densities to meet local and regional housing needs.

The General Plan identifies the San Francisco Water Department lands as "vacant residential land" with a capacity for 2,257 units – the largest of the areas that would collectively "meet and exceed Pleasanton's aggregate share of regional needs as determined by ABAG."<sup>124</sup>

The Cooperative Plan agreement provides for the incorporation of a "rental and ownership inclusionary affordable housing program" to provide "a total of approximately 10 percent affordable housing onsite through utilization of Project-generated fees." The agreement goes on to state that 25 percent of the rental units will be affordable to households earning 60 percent of the median income, and that the remaining affordable units will be "for sale" single family homes affordable to moderate income households (earning approximately 100 percent of the median income). Conformance of development on the project site to these provisions of the agreement would be consistent with the General Plan in contributing to the City's ability to provide housing for all economic segments of the community, and to meet its fair share of regional housing needs.

## **B. Drainage**

General Plan policies related to drainage are found in the Public Safety Element (Chapter V), the Public Facilities Element (Chapter VI), the Conservation and Open Space Element (Chapter VII), and the Subregional Planning Element (Chapter XII). Policies and programs in these elements are intended to provide for

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<sup>124</sup> *Pleasanton General Plan*, 1996, Housing Element, p. IV-10 and Table IV-10, p. IV-45.



adequate storm drainage and to restrict development in flood-prone areas. Both the Cooperative Plan and the Preferred Plan, with mitigations specified in Chapter 5, conform to the General Plan.

### **C. Water**

General Plan policies related to water are found in the Housing Element (Chapter IV), the Public Facilities Element (Chapter VI), and the Conservation and Open Space Element (Chapter VII). Policies and programs in these elements are intended to encourage water conservation, provide for an adequate water supply and water delivery system, and protect water quality through storm water runoff controls and controls on water reclamation and recharge. Both the Cooperative Plan and the Preferred Plan, with mitigations specified in Chapter 5, conform to the General Plan.

### **D. Wastewater**

General Plan policies related to wastewater are found in the Public Facilities Element (Chapter VI), the Conservation and Open Space Element (Chapter VII), and the Subregional Planning Element (Chapter XII). Policies and programs in these elements are intended to provide for an adequate wastewater collection and treatment system while protecting groundwater quality. Both the Cooperative Plan and the Preferred Plan, with mitigations specified in Chapter 5, conform to the General Plan.

### **E. Public Services: Education**

General Plan policies related to education are found in the Land Use Element (Chapter II) and the Public Facilities Element (Chapter VI). Policies and programs in these elements are intended to provide for appropriately-located sites for new schools needed to accommodate enrollment increases. Both the Cooperative Plan and the Preferred Plan, with mitigations specified in Chapter 5, conform to the General Plan.

### **F. Public Services: Police**

General Plan policies related to police services are found in the Public Safety Element (Chapter V). Policies and programs are intended to provide for continuing high-quality police protection in Pleasanton. Because they do not relate to physical conditions, they are not addressed in this EIR.

### **G. Public Services: Fire**

General Plan policies related to fire protection are found in the Land Use Element (Chapter II) and the Public Safety Element (Chapter V). Policies and programs in these elements are intended to provide continuing high-quality fire protection in Pleasanton, including both structural requirements for new development and response times to emergency calls. Structural requirements are not addressed in this EIR, which applies to the specific plan. Both the Cooperative Plan and the Preferred Plan provide a site for a fire station that will assist the City in maintaining conformance with its General Plan.

### **H. Public Services: Parks and Community Services**

#### **1. Amount of Park Land**

The Pleasanton General Plan includes a number of policies and programs that are intended to assure that parks and recreational facilities are provided for the City's residents. To implement the goal of achieving

and maintaining “a complete, well-rounded community of desirable neighborhoods, a strong employment base, and a variety of community facilities” (Goal 1), the Land Use Element contains the following policy and program:

**Policy 9:** Provide each major residential area with high quality neighborhood facilities including an elementary school, park, and other amenities.

**Program 9.1:** Adopt specific plans for developing large landholdings to identify facility needs and establish development guidelines.

In addition, Table II-7 of the General Plan (pp. II-33) includes a future community park of 35 acres on the San Francisco Water Department Bernal site. According to the table, the functions of this park are undetermined.

The Public Facilities Element (Chapter VI) of the General Plan contains the following policies and programs that complement and refine those of the Land Use Element:

**Policy 13:** Enhance the recreational opportunities for all Pleasanton residents through a program of planned expansion.

**Policy 14:** Promote the development of public golf courses within the Planning Area.

**Program 14.1:** Encourage the development of at least one municipal, affordable, walkable golf course, and at least one championship golf course open to the public.

**Program 14.2:** Encourage golf course designs which conserve water resources.

Finally, the Conservation and Open Space Element (Chapter VII) strives to “achieve a complete park and recreation system featuring a wide variety of opportunities to serve the public need” (Goal 4) through implementation of the following policy and program:

**Policy 11:** Provide sufficient parkland and recreation opportunities to accommodate existing and future needs of residents, workers, and visitors.

**Program 11.5:** Develop neighborhood, community, and regional parks in accordance with the guidelines and recommendations contained in the Municipal Facilities Master Plan.

The Municipal Facilities Master Plan, described in Chapter 5, Part H (Parks and Community Services), calls for the provision of two acres of neighborhood parks, three acres of community active use parks, one acre of community special use parks, and four acres of natural open space per 1,000 residents.

The conformance of the Cooperative Plan and the Preferred Plan to these acreage requirements is described in Chapter 5 (see Table 28). While the community active use park included in both plans is 20 acres rather than the 35 acres specified in the General Plan, the golf course (which encompasses 157 acres in the Cooperative Plan and about 168 acres in the Preferred Plan) compensates for this deficit and complies with Policy 14 and Program 14.1 of the Public Facilities Element. The 20-acre park included in the Cooperative Plan and the Preferred Plan is considered by staff to meet the intent, if not the letter, of General Plan Table II-7. (Both the Cooperative Plan and the Preferred Plan also include an option for the City to acquire additional land to achieve the acreage specified in the General Plan.) As noted in Chapter 5, Part H (Parks and Community Services), however, the scarcity of land in Pleasanton that is suitable for community parks – given their distinct locational and topographic requirements from those of neighborhood parks, requiring



sufficient vehicle access and flat land to accommodate their purposes – makes it a priority that a community park of the maximum size possible be included in any plan for the Bernal site.

## **2. Locations and Configurations of Parks**

To assure that new parks are geographically distributed in a manner that best serves the residents of Pleasanton, the Conservation and Open Space Element (Chapter VII) of the General Plan includes the following policies and implementing programs:

- Policy 11:      Provide sufficient parkland and recreation opportunities to accommodate existing and future needs of residents, workers, and visitors.
  - Program 11.3:    Disperse neighborhood and community parks throughout the City and combine them with areas of natural, scenic, or cultural resources.
  - Program 11.4:    Provide a wide variety of active and passive recreational facilities to accommodate the needs of a diverse community.
  - Program 11.5:    Develop neighborhood, community, and regional parks in accordance with the guidelines and recommendations contained in the Municipal Facilities Master Plan.
  - Program 11.7:    Provide community parks with adequate parking facilities to the greatest extent possible.
  - Program 11.8:    Locate neighborhood parks within one-half mile of the residential area they serve. To the greatest extent possible, such parks should not be separated from the neighborhood they serve by major arterials, commercial centers, and topographical or other features which create a direct or perceived physical barrier to the park.
- Policy 12:      Promote the development of bicycle, equestrian, and hiking trails throughout the Planning Area.
  - Program 12.1:    Develop a system of bicycle, equestrian, and hiking trails in accordance with the Community Trails Master Plan.
  - Program 12.2:    Promote the connection of public places through the extension of bike and pedestrian trails.
  - Program 12.4:    Eliminate at-grade trail crossings of railroad tracks and major arterials through the use of underpasses or overpasses where feasible.
  - Program 12.5:    Encourage developers to dedicate public access easements in private open space areas to facilitate the system of trails in Pleasanton shown on the General Trails Map.

Park locations in both the Cooperative Plan and the Preferred Plan are within one-half mile of residential areas. Because the City measures distance “as the crow flies” rather than according to travel routes, the accessibility issue described in Chapter 5, Part H with regard to the Cooperative Plan does not create inconsistency with the General Plan.

## **I. Public Services: Libraries**

The Land Use Element (Chapter II) of the General Plan contains one policy related to libraries: it calls for provision of a diversity of community facilities to maintain and improve service levels for existing and future residents. Because the development permitted by either plan proposed for the project site would not affect the adequacy of library service, both plans are consistent with the General Plan.

## **J. Transportation**

General Plan policies related to transportation are found in the Land Use Element (Chapter II), the Circulation Element (Chapter III), and the Subregional Planning Element (Chapter XII).

### **1. Transportation and Land Use**

The General Plan contains one policy that addresses the relationship between land use and transportation. It is in the Land Use Element:

- Policy 13: Integrate land use and transportation planning in order to ensure patterns that facilitate safe and convenient mobility of people and goods at a reasonable cost, and to increase travel alternatives to the single-occupant vehicle.

The proposed project adheres to this policy by providing an integrated plan for land use and transportation.

### **2. Planning for Circulation and Transportation**

The Circulation Element of the General Plan outlines the routes and hierarchy of roads that are expected to be needed to serve Pleasanton when all development allowed by the Plan has been completed, and calls for planning this circulation system as development proceeds. Key policies and programs of the Circulation Element are:

- Policy 1: Complete the City's street and highway system in accordance with the General Plan map.
- Program 1.1: Require new developments to pay for their fair share of planned roadway improvement costs.
- Program 1.5: Coordinate with Alameda County regarding use of the Alameda County Transportation Corridor (abandoned Southern Pacific right-of-way) for circulation related use.
- Policy 2: Phase development and roadway improvements so that Levels of Service do not exceed LOS D at major intersections outside the Central Business District.
- Program 2.2: Require site-specific traffic studies for all major developments which have the potential to exceed LOS D, and require developers to implement the mitigation measures identified in these studies.
- Program 2.5: Require whatever mitigation measures are necessary, including the withholding of building permits, to return intersections to acceptable levels, in the event that LOS D is exceeded.



The proposed project would generally conform to Policy 1 and related programs by building all onsite roads and paying transportation impact fees that are levied by the Tri-Valley Council and the City of Pleasanton to cover its fair share of offsite improvements for which those fees are intended. In addition, with implementation of the mitigation measures recommended in Chapter 5, Part J (Transportation), it would contribute to offsite improvements covered by fees in order to reduce project impacts so that Levels of Service do not exceed LOS D at major intersections outside the Central Business District (Policy 2).

Policy 1 requires the City's circulation network to be completed as shown on the General Plan map. For the Bernal property, the affected streets are Bernal Avenue, the Bernal Avenue/I-680 interchange, and the extension of Valley Avenue through the site to Sunol Boulevard. All of the plans for the site show Bernal Avenue and Bernal Avenue/I-680 interchange improvements consistent with the General Plan map. The extension of Valley Avenue, however, is treated differently by the various plans.

The Cooperative Plan shows Valley Avenue extended across the Central Parcel, over the UPRR tracks, and ending in a stub at the eastern boundary of the East Parcel; from this end point, it could be extended to Sunol Boulevard in the approximate location shown on the General Plan map. The slight relocation of the road to align alongside I-680 is not a significant change. This street alignment is entirely consistent with the Valley Avenue extension depicted on the General Plan map.

The Preferred Plan (Alternative 1) and Alternative 2 depart from a straightforward extension. The Preferred Plan extends Valley Avenue into the Central Parcel as a neo-traditional collector, rather than as a thoroughfare, and connects to Sunol Boulevard via Junipero Street, not as a new street. The Alternative 2 street network is even more convoluted, but connects the Central Parcel to Sunol Boulevard via Junipero Street as well. Traffic analyses have shown that a direct thoroughfare connection between Valley/Bernal and Sycamore/Sunol is not necessary to meet General Plan level-of-service standards given the proposed densities of development on the SFWD Bernal property. The Junipero Street connection to Sunol Boulevard is sufficient for all traffic associated with development of the site as well as traffic resulting from General Plan buildout.

The General Plan specifies that “. . . land uses, densities, and street alignments . . .” are subject to the outcome of the specific plan (emphasis added). Thus, the alignments shown in the Preferred Plan and Alternative 2 can be found to be consistent with the General Plan and Policy 1 of the Circulation Element in the configuration shown, assuming all other traffic policies can be met.

The traffic analysis prepared for this EIR and the mitigation measures recommended to reduce potential impacts to less-than-significant levels bring the proposed project into conformity with Programs 2.2 and 2.5.

### **3. Project Design**

Policies and programs in the Circulation Element call for:

Policy 3: Facilitate the free flow of vehicular traffic on major arterials.

Program 3.3: Prohibit private access to major arterials.

Policy 4: Design and regulate City streets to minimize traffic-related impacts on adjacent land uses.

- Program 4.1:** Provide setbacks, landscaping, soundwalls, and other methods to protect adjacent land uses from safety, noise, and air quality impacts associated with traffic on arterials.
- Policy 5:** Adhere to City design standards for streets in new developments.
- Program 5.1:** Incorporate City design standards for arterials, collectors, neighborhood collectors, and local public and private streets as part of the City's review of new developments.
- Program 5.2:** Provide more than one access road to new developments, and discourage cut-through traffic by appropriate use of traffic controls.
- Program 5.3:** Discourage the development of further gated communities.
- Program 5.4:** Develop standards for siting homes adjacent to public streets which address level of traffic, safety, vehicular noise, visual quality, and related environmental issues.
- Policy 6:** Maximize traffic safety for automobile, transit, bicycle users, and pedestrians.
- Program 6.3:** Separate vehicular, bicycle, and pedestrian traffic, wherever feasible, especially on routes to schools.
- Program 6.4:** Provide bike lanes on collector streets, where feasible.
- Program 6.5:** Particular sensitivity should be given to new development on streets which are projected to carry more than 2,000 average daily trips, and with existing houses which front such streets.
- Program 6.6:** Restrict parking near intersections to ensure visibility and traffic safety.
- Program 6.7:** Require the installation of bus turnouts and shelters along planned transit routes.
- Policy 7:** Require adequate on and off-street parking.
- Program 7.1:** Enforce the parking provisions of the City's Zoning Ordinance for all projects, including Planned Unit Developments.
- Policy 15:** Create and maintain a safe, convenient, and effective bicycle system which encourages increased bicycle use.
- Program 15.3:** Integrate bike lanes or separate bikeways into street projects, wherever feasible.
- Program 15.4:** Require the provision of adequate bicycle storage facilities in future developments.
- Policy 16:** Create and maintain a safe and convenient pedestrian system which encourages walking as an alternative to driving.
- Program 16.1:** Require developers to finance and install sidewalks and pedestrian pathways in future developments.

The Cooperative Plan and Preferred Plan both generally adhere to these policies and programs. As is noted in Chapter 5, Part J (Transportation), access from Bernal Avenue to commercial areas is provided via streets and several driveways, while access to residential areas is via streets that intersect with Bernal.



Both projects are designed to minimize traffic-related impacts on adjacent land uses (Policy 4) by incorporating noise mitigation between residential areas and I-680, which is the major source of traffic-related noise. Both plans accommodate trails designated in the *Community Trails Master Plan* and for sidewalks to accommodate safe pedestrian travel.

The Cooperative Plan conforms to City street standards. As indicated in Chapter 5, the Preferred Plan circulation system includes narrower streets as well as numerous roundabouts and traffic circles throughout the site. While these configurations are not consistent with existing City street design standards, they are being reviewed as a means to adequately address ways to meld the traffic-carrying requirements for residential streets with neighborhood/environmental considerations, as described in Program 5.4. Because this design (with implementation of the recommended mitigation measures) does accommodate the projected traffic volumes, consistent with safety, noise, visual quality, and related environmental issues, it may be considered consistent with City policy.

In addition to the policies and programs identified above, the Pleasanton General Plan map of the City's proposed transit system (Figure III-8) shows a park-and-ride lot on the project site, southeast of the I-680/Bernal Avenue interchange. This map designation is intended to be general; the actual lot will be located northwest of the interchange. Because an alternate site for the facility has already been identified, the plans proposed for the project site are not inconsistent with the General Plan in this regard.

#### **4. Subregional Transportation Goals**

The Subregional Planning Element of the Pleasanton General Plan includes the following transportation-related policies and programs, which are consistent with the Subregional Plan adopted by the Tri-Valley jurisdictions:

- Policy 8: Encourage the increased use of transit and other alternative modes of transportation.
- Program 8.4: Support the development of a subregional network of trails for bicycles, pedestrians, and equestrians.
- Policy 11: Cooperate with Tri-Valley jurisdictions and agencies to undertake subregional transportation improvement projects.
- Program 11.1: Cooperate with neighboring jurisdictions to develop a parallel arterial street system to relieve congestion on I-580 and I-680.
- Program 11.9: Participate in the development and implementation of the Tri-Valley Development Impact Fee.

Both the Cooperative Plan and the Preferred Plan are consistent with these policies and programs. In particular, both plans include sidewalks and accommodate the trails designated in the *Community Trails Master Plan*, and development permitted by either plan would be required to pay the Tri-Valley Development Impact Fee.

## **K. Air Quality**

The Air Quality Element (Chapter IX) of the Pleasanton General Plan contains the following key policies and programs that relate to the proposed project:

- Policy 4: Review proposed projects for their potential to impact air quality conditions.
  - Program 4.1: Include air quality as a factor in the City's environmental review process. Encourage development plans which minimize negative impacts on air quality.
  - Program 4.3: Encourage pedestrian-oriented developments which provide options for non-motorized transit to outside primary destination points such as parks, schools, and shopping centers.
  - Program 4.6: Encourage the provision of services, facilities, and infrastructure to reduce the need to travel by single-occupant vehicles.
  - Program 4.9: Require design measures and facilities to accommodate access by pedestrians, bicycles, and transit in new developments.
- Policy 5: Review proposed projects for their potential to generate hazardous air pollutants.
  - Program 5.2: Require uses which utilize hazardous materials to submit emergency response plans for possible spills, leaks, or other accidental emissions of hazardous materials.
- Policy 6: Separate air pollution sensitive land uses from sources of air pollution.
  - Program 6.2: Require landscape buffer zones within residential and sensitive receptor site plans to separate those uses from transportation corridors, transit hubs, freeways, arterials, point sources, and hazardous materials-related uses.

This EIR reviews both the Cooperative Plan and the Preferred Plan for their potential to affect air quality and/or generate hazardous air pollutants, and both separate the sensitive receptors (residential uses and schools) from the I-680 freeway. By providing a mix of land uses, and relatively higher-density housing that places a greater number of people within walking distance of the Village Center, both plans encourage travel by means other than private automobile (i.e., walking and bicycling). Based on these conditions, the plans are consistent with the policies of the General Plan.

## **L. Noise**

The Noise Element (Chapter VIII) of the Pleasanton General Plan contains the following policies and implementing programs that are relevant to the proposed project:

- Policy 1: Require new projects to meet acceptable exterior noise level standards.
  - Program 1.1: Use the "normally acceptable" noise levels for new uses as established in the "Noise and Land Use Compatibility Guidelines" contained in Table VIII-3 (of the General Plan).



- Program 1.2: Use noise guidelines and contours to determine the need for noise studies and require new developments to construct or pay for noise attenuation features as condition of approving new projects.
- Program 1.3: Require noise studies for future projects to use a consistent format, to analyze alternative mitigations and to evaluate the effectiveness of the mitigations following their implementation.
- Policy 3: Ensure that noise does not exceed interior noise levels of 45  $L_{dn}$  for residential uses and those levels specified in noise studies for other uses.
- Program 3.1: Require new developments to pay their fair share of mitigation measures necessary to reduce interior noise levels within adjacent or impacted land uses.
- Policy 5: Protect schools, hospitals, libraries, religious facilities, convalescent homes, and other noise-sensitive uses from noise levels exceeding those allowed in residential areas.
- Program 5.1: Locate noise-sensitive uses away from noise sources unless mitigation measures are included in development plans.
- Policy 6: Limit truck traffic in residential and commercial areas to designated truck routes.
- Policy 7: Design City streets to reduce noise levels in adjacent areas.
- Program 7.1: Require earth berms, setbacks, soundwalls, and other noise reduction techniques as conditions of development approval. Soundwalls should be used only when other techniques are not feasible.
- Program 7.2: Attempt to maintain local and collector streets at 6000-9000 ADT or less to ensure acceptable noise levels within adjacent residences

“Normally acceptable,” “conditionally acceptable,” and “unacceptable” noise conditions are defined in Chapter 5, Part L (Table 46). This EIR uses the Noise and Land Use Compatibility Guidelines referenced in Program 1.1 to evaluate whether the project conforms to City of Pleasanton standards.

With mitigation, most of the project site will be subject to noise levels that lie within the normally acceptable range. Consistent with Program 7.1, the specific plan incorporates earth berms and soundwalls to reduce noise levels to the acceptable range; consistent with Program 3.1, the project would pay for mitigation measures needed to reduce interior noise levels within adjacent or impacted land uses onsite.

Neither the Cooperative Plan nor the Preferred Plan locates the school, which is a noise-sensitive use, away from noise sources (i.e., the fire station), but the recommended mitigation measures would reduce the noise impacts of the fire station to a less-than-significant level.

With the implementation of the noise mitigation measures proposed in Chapter 5, Part L (Noise), the specific plan project would be consistent with the General Plan, except in one area: Impact L3 finds that users of outdoor recreation facilities within the project area – specifically, users of the golf course, the community park, the neighborhood park on the West Parcel near Bernal Avenue, and the neighborhood park/open space area on the East Parcel – may be exposed to noise levels in excess of the maximum

“normally acceptable” levels established in the General Plan. Noise levels on the East Parcel cannot feasibly be mitigated to an acceptable level.

**Consistency Finding 1**      The proposed project is inconsistent with the Noise Element of the General Plan in providing outdoor recreation uses (i.e., on the East Parcel) in areas not adequately protected from noise.

## **M. Cultural Resources**

The Conservation and Open Space Element (Chapter VII) of the General Plan addresses cultural resources:

- Policy 6:            Preserve and rehabilitate those cultural and historic resources which are significant to Pleasanton because of their age, appearance, or history.
- Program 6.2:      Require archaeological studies in areas of known archaeological significance prior to development approval.

The mitigation measures to address impacts on cultural resources recommended in Chapter 5, Part M (Cultural Resources) of this EIR call for the completion of an intensive cultural resources survey of the study area prior to the approval of any grading or development plans, including infrastructure plans; the protection of important cultural resources through avoidance, open-space declaration or capping; or, if known sites cannot be avoided, development and implementation of a Data Recovery Plan at those sites. With implementation of these mitigation measures, the proposed project would conform to the General Plan.

## **N. Visual Resources**

### **1. Scenic Resources**

Pleasanton’s visual and scenic resources are identified in the Conservation and Open Space chapter of the General Plan. Scenic resources are one focus of Goal 1:

- Goal 1:      To preserve and enhance the natural resources of the Planning Area, including plant and wildlife habitats, heritage trees, scenic resources, and water courses.
- Policy 2:            Preserve heritage trees throughout the Planning Area.
- Program 2.1:      Follow the provisions of the City’s Heritage Tree Ordinance when reviewing future development projects. (A heritage tree is a tree which meets any of several criteria set forth in the City of Pleasanton Municipal Code (Section 17.16.006 – Tree Preservation Ordinance, cited in Appendix F).)
- Policy 3:            Preserve and enhance stream beds and channels in a natural state, except where needed for flood and erosion control.
- Program 3.1:      Develop and implement ordinances and policies that provide for the preservation and restoration of riparian corridors, and establish mitigation requirements for modifications to such corridors.



**Policy 5:** Preserve as permanent Open Space all areas of outstanding scenic qualities or areas which provide extraordinary views of natural and man-made objects.

**Program 5.2:** Implement the recommendations contained in the Scenic Highway Plan for I-680.

The General Plan map assigns the use designation "Public Health and Safety" to certain portions of the study area. This designation, when used between two disparate uses that otherwise would abut one another, indicates need for a buffer zone. The flood plain along the Arroyo de la Laguna carries that designation, as do the narrow strips of land adjacent to I-680 and to the railroad tracks. Buffers in those locations would protect future development from hazards due to floods, traffic noise and railroad operations, respectively; they would also provide an opportunity for visual buffering of transportation facilities from adjoining uses. (General Plan, p. VII-6.)

The buffer called for by the General Plan "Public Health and Safety" designation need not be open space. Other elements that protect the Arroyo from disturbance are also appropriate, and sound barriers may also be considered as acceptable buffer devices if they are acceptable under General Plan visual criteria (see following section).

The knoll is a natural visual resource of the site, a singular and attractive scenic element from off the site, and a point offering panoramic views from the site. The Arroyo de la Laguna is also a visual resource, contributing to the scenic qualities of (especially) the West Parcel.

Another visual resource of the study area identified in the General Plan is heritage trees. Consistency of the specific plan with protection of heritage trees is addressed in Chapter 5, Parts O (Biology) and N (Visual Resources).

## **2. Streetscape Design**

Pleasanton's goals for community character (General Plan, Chapter X. Community Character Element) have a direct bearing on future planning for the specific plan area, and particularly with respect to the Bernal Avenue entry way to Pleasanton and to use of sound barriers to mitigate impacts of noise on development:

**Goal 3:** To enhance the appearance of major City entry streets.

**Policy 8:** To improve the visual quality of entries to Pleasanton.

**Program 8.1:** Adopt a plan to install distinctive landscaping and possibly signing at the following City entry locations: [including] Bernal Avenue/Interstate 680.

**Program 8.2:** Land use planning in areas adjacent to City entries should be particularly sensitive to aesthetic considerations.

**Policy 9:** Provide significant landscaping along all arterial streets leading from City entries to the Downtown.

**Program 9.1:** Complete and infill the street tree and median landscaping along the following streets: [including] Bernal Avenue.

**Policy 12:** Improve street identification and directional signage along major entry streets to the City.

**Program 12.1:** Conduct an inventory of existing conditions and prepare a plan for new street and directional signage along the following roads: [including] Bernal Avenue.

Several elements of the proposed project raise issues of potential inconsistency with the General Plan policies reviewed above:

- Potential impact on attractiveness of “gateway” to Pleasanton (at the Bernal Avenue/I-680 interchange) and along Bernal Avenue between the “gateway” and downtown Pleasanton.

The Bernal Avenue/Interstate 680 interchange is an entry to the project site as well as to the City of Pleasanton, and Bernal Avenue is one of the major project boundaries. As noted above, some street trees along Bernal Avenue are expected to be displaced as a result of roadway improvements. Those trees should be replaced and the long term attractiveness of this tree-lined entry to Pleasanton enhanced.

- Potential aesthetic impact of soundwalls.

Impacts of noise associated with regional roadways (I-680 and Bernal) would require mitigation. Soundwalls as a noise mitigation can be unattractive and deprive passersby of views into and beyond the site, as analyzed in Chapter 5, Part N (Visual Resources). In the case of the Bernal Avenue property, much of the site will be occupied by green areas – golf, parks, open space – capable of provide attractive vistas. In addition, attractive distant views are available on the horizon encircling the site, including Pleasanton Ridge to the west, Mt. Diablo to the north east, and the Mt. Hamilton Range to the south. A sound barrier that blocks attractive views compounds its adverse visual consequences if it is also unattractive.

Each of these areas of potential adverse impact is identified in Chapter 5, Part N (Visual Resources). A specific plan can normally incorporate measures required to mitigate impacts of the kinds identified. With implementation of the visual mitigation measures identified in Chapter 5, the proposed project, in the form of Alternative 1 (the Preferred Plan), would conform to the General Plan.

## **O. Biology**

The Conservation and Open Space Element (Chapter VII) of the General Plan contains the following goals, policies, and programs for the conservation of natural resources, including natural open space and wildlife habitats:

**Goal 1:** To preserve and enhance the natural resources of the Planning Area, including plant and animal habitats, heritage trees, scenic resources, and water courses.

**Policy 1:** Preserve and enhance natural wildlife habitats and wildlife corridors.

**Program 1.1:** Complete a comprehensive study of the ecosystems and wildlife habitat areas within and around the Planning Area, and develop and implement ordinances and policies that will provide for their preservation and enhancement.

**Program 1.3:** Preserve and enhance the resource value of wetlands through project development design measures. These measures should be based in part on a jurisdictional wetlands delineation in accordance with current Army



Corps of Engineers criteria, for projects which are known to have or that may have wetlands present within their boundaries.

- Program 1.4: Develop and implement ordinances and policies that provide for the preservation of wildlife corridors, and establish mitigation requirements which minimize the barriers across wildlife corridors that roadways and developments can create.
- Program 1.5: Investigate existing private, State, and Federal incentive programs and develop City incentive programs that encourage property owners to cooperate in the preservation and restoration of wildlife habitat.
- Program 1.6: Include potential impacts on wildlife populations and habitats in CEQA review of development projects.
- Policy 2: Preserve heritage trees throughout the Planning Area. (A heritage tree is a tree which meets any of several criteria set forth in the City of Pleasanton Municipal Code (Section 17.16.006 – Tree Preservation Ordinance, cited in Appendix F); generally, a tree with a circumference of at least 55 inches or a height of at least 35 feet.)
  - Program 2.1: Follow the provisions of the City's Heritage Tree Ordinance when approving future development projects.
- Policy 3: Preserve stream beds and channels in their natural state, except where needed for flood and erosion control.
  - Program 3.1: Develop and implement ordinances and policies that provide for the preservation and restoration of riparian corridors, and establish mitigation requirements for modifications to such corridors.
  - Program 3.4: Design projects adjacent to arroyos to protect habitat areas.

The mitigation measures for potential impacts on biological resources (Chapter 5, Part O) assure that development according to the Cooperative Plan or the Preferred Plan would be consistent with the policies and programs identified above. Measures O4a and O4b require verification and delineation of wetlands on the site, and – if wetlands are found – preparation of a mitigation plan that will meet federal and state requirements, and thus assure conformance to Policy 1. Mitigation Measure O3 requires a survey of heritage trees, and notes that existing City law governs the removal of heritage trees. Enforcement of the law will assure that development permitted by either the Cooperative Plan or the Preferred Plan is consistent with General Plan Policy 2. Mitigation Measures O1a and O1b are intended to assure that development permitted by either the Cooperative Plan or the Preferred Plan reduces potential impacts on riparian habitats to less-than-significant levels, and consequently that both plans (as mitigated) conform to Policy 3.

## **P. Public Health and Safety**

Pleasanton's goals, policies and programs relating to hazardous materials are set forth in the Public Safety Element (Chapter VI) of the 1996 General Plan. Goals, policies and programs relevant to this project include the following:

Goal 5. To minimize the risks to lives and property due to potential exposure to hazardous materials.

- Policy 16.** Regulate the transportation, delivery, use and storage of hazardous materials within the City limits.
- Program 16.1.** Enforce the provisions of the City's Hazardous Materials Storage Permit Ordinance.
- Program 16.3.** Expand the Fire Department's automated data system to speed identification of hazardous materials and users in the event of an emergency.
- Policy 17.** Ensure that hazardous materials and potential contamination are remediated prior to development.
- Program 17.1.** Require a site specific soils report for new development where there is a history of prior industrial or agricultural land use activities.

Mitigation measures for public health and safety recommended in Chapter 5, Part P are intended to bring the Cooperative Plan and Preferred Plan into conformance with the General Plan. Measure P1a requires the identification of existing contamination (consistent with Program 17.1); Measure P1b calls for refinement of the land use plan (if necessary) to avoid adverse effects of contamination, and Measure P1c requires remediation of hazardous conditions, if any are found (consistent with Policy 17). Because the existing Hazardous Materials Storage Permit Ordinance regulates the transportation and storage of hazardous materials, no project-specific mitigation is needed to comply with Policy 16.

## **Q. Geology, Soils, and Seismic Safety**

The Public Safety Element (Chapter V) of the General Plan contains the following goals, policies and programs related to seismic risk. This list does not include programs that are not applicable to the study area (such as those that apply specifically to Alquist-Priolo Special Studies Zones, of which there are none in the study area).

- Goal 1.** To minimize the risks to lives and property, and to minimize the potential liability of the City, due to seismic activity within the Planning Area.
- Policy 1.** Restrict development in areas prone to seismic safety hazards.
- Program 1.1.** Comply with the Alquist-Priolo Act and other seismic safety criteria established by the City of Pleasanton.
- Program 1.2.** Prohibit construction of habitable structures within at least 50 feet of an identified fault trace (Figure V-3 of the Pleasanton General Plan) as shown in site specific geologic studies.
- Program 1.3.** Prohibit construction of facilities and systems vital to the public health and safety (e.g., water facilities, fire stations, hospitals, communication facilities, etc.) within the Alquist-Priolo Earthquake Fault Zones.
- Policy 2.** Investigate the potential for seismic and geologic hazards during the development review process, and implement soil engineering and construction standards which minimize potential danger from earthquakes.
- Program 2.1.** Require site specific soils, geologic and/or geotechnical engineering studies prior to development approval of structures for human occupancy for any project proposed within areas shown on current Alquist-Priolo Earthquake Fault Zones Maps. Also, require such studies for any project proposed within areas identified with "Moderately High" to "Extreme" seis-



mic shaking amplification (Table V-3 and Figure V-4 of the Pleasanton General Plan).

**Program 2.2.** Design and construct all structures to address potential seismic and geologic hazard conditions according to the State Uniform Building Code standards or more stringent standards. All structures and facilities not addressed by the UBC shall be designed and constructed to mitigate potential seismic and geologic hazards as recommended by site specific soils, geologic, and/or geotechnical engineering studies.

**Program 2.4.** Design new bridges and retrofit existing bridges with appropriate engineering and design mitigations in accordance with Caltrans standards.

**Program 2.5.** Require technical review and analysis of soils, geologic, and geotechnical studies by a qualified consulting engineering geologist reporting to the City of Pleasanton. Incorporate the recommendations of the City's consulting engineer into the project design.

**Program 2.6.** Require professional inspection of foundations, piers, excavation, earthwork, and other aspects of site development during construction. Ensure that all mitigations recommended by the City's consulting engineer are incorporated into the project construction.

**Policy 3.** Require post-earthquake construction, if needed, to conform to all City codes and ordinances.

**Program 3.1.** Require building permits and enforce all current building requirements and codes for post-earthquake construction.

**Goal 2.** To minimize the risks to lives and property, and to minimize the potential liability of the City, due to geologic hazards within the Planning Area.

**Policy 5.** Investigate the potential for geologic hazards as part of the development review process, and maintain this information for the public record.

**Program 5.1.** Require site-specific soils studies for all new development prior to the issuance of building permits and prior to the approval of final improvement plans in areas with "Moderate," "Moderate to High," or "High" hazards for the following geologic hazards: seismic shaking, lateral spreading, differential settlement, lurch cracking, liquefaction, erosion, and expansive soils.

**Program 5.2.** Require site-specific geologic and/or geotechnical engineering studies prior to development approval in areas with "Moderate," "Moderate to High," or "High" hazards for the following geologic hazards: surface fault rupture, bank failures, rock falls, and landslides; and for areas with slopes equal to or greater than 20 percent.

**Program 5.3.** Require measures to mitigate potential geologic safety hazards during adverse conditions such as saturated soils and groundshaking, and during grading of the site for roads, installation of infrastructure, and creation of building pads. Mitigation measures identified by the site engineering studies shall be incorporated into the project design.

- Program 5.4. Require technical review and analysis of geotechnical studies by a qualified consulting engineer reporting to the City. Incorporate the recommendations of the City's consulting engineer into the project design.
- Program 5.5. Permit development in areas with a "high" susceptibility to geologic hazards only when geologic and soils investigations demonstrate that hazards can be mitigated by accepted engineering and construction techniques. Mitigation measures identified by the investigations shall be incorporated into the project design and subject to approval by the City's reviewing geologist/engineer.

The project area is more than 0.5 mile from the nearest fault trace (see Table 51), and therefore is outside of any area in which construction would be limited by Programs 1.1, 1.2, and 1.3, or for which specific studies would be required subject to Program 2.1. Development pursuant to any specific plan for the project area would be subject to Programs 2.2, 2.5, 2.6, 3.1, and 5.1 through 5.5; similarly, any bridge that is constructed consistent with a plan for the area would be subject to Program 2.4. As a result, development permitted by the Cooperative Plan and the Preferred Plan would conform to the General Plan.

## **R. Energy**

The Housing Element (Chapter IV) of the Pleasanton General Plan contains the following goal and policy for energy conservation.

- Goal 6. To balance housing development with environmental protection.
  - Policy 23. Encourage energy and water conservation designs and features in new residential development.
    - Program 23.1. Consider building orientation, ceiling height, street layout, lot design, landscaping and street tree configuration in subdivision review for purposes of solar access and energy conservation.

The Conservation and Open Space Element (Chapter VII) of the Pleasanton General Plan also contains one goal, with supporting policies and programs, for energy conservation.

- Goal 6. Promote the use of energy conservation measures.
  - Policy 14. Require all structures to meet energy conservation requirements stipulated in the State Uniform Building Code.
    - Program 14.1. Review development applications for potential energy conservation measures and designs including site orientation, building design and materials, landscaping, and solar access.
    - Program 14.2. Private restrictions which are subject to approval by the City (such as Conditions, Covenants, and Restrictions, etc.) should not prohibit solar collecting facilities or other energy conservation measures.



Neither the Cooperative Plan nor the Preferred Plan locks in building characteristics (orientation, ceiling height, building materials, etc.) for future development. Because neither plan incorporates characteristics or requirements that conflict with the General Plan, both are considered to be in conformance.

## **S. General Plan Elements That Are Not Covered by the EIR Analysis**

### **1. Economic and Fiscal Element**

The goals for Pleasanton's local economy and fiscal health are general in nature and relate only indirectly to the proposed specific plan:

**Policy 2:** Actively recruit and attract businesses and industries which are compatible with the priorities within Pleasanton's and consistent with the environmental holding capacity of the land and surrounding land uses.

The Cooperative and Preferred Plans support this policy by providing a significant amount of new employment development in its retail and commercial/office components. The consistency between the scale of specific plan development and Pleasanton's environment is the overall subject of this EIR.

**Policy 5:** Recover the costs of new facilities and infrastructure necessitated by development.

Mitigation measures specified in Chapter 5, Parts B, C, D, E, H, and J of this EIR are intended to implement this policy, by requiring payment of impact fees, dedication of land for new facilities, or construction of new facilities that are required to serve the population of the project area at a level consistent with the General Plan.

**Policy 6:** Impose user fees when appropriate.

**Program 6.1:** Require large developments to prepare a fiscal analysis which measures direct and indirect costs and benefits to the City.

To comply with Program 6.1 would require the preparation of a fiscal impact analysis for the specific plan that is ultimately adopted for the site, to determine whether new development permitted by the plan would pay its own way. The City's ability to impose user fees may, however, be constrained by the provisions of Proposition 218, which was adopted by California voters in November 1996. That measure specified, among other things, that property-based charges may be applied only to services that go directly to property, and not to "general services" such as police protection.

A fiscal analysis has been prepared for the County Plan (Alternative 3), but not for either the Cooperative Plan or the Preferred Plan.

<b>Consistency Finding 2a.</b>	<b>A fiscal impact analysis of the adopted specific plan must be prepared to measure the changes in costs and revenues that would result from development consistent with that plan.</b>
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<b>Consistency Finding 2b.</b>	<b>If the analysis indicates that the permitted development is likely to generate costs in excess of revenues, then it must identify plan adjustments or financial mechanisms that would enable the project to achieve fiscal neutrality for the City of Pleasanton.</b>
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## **2. Subregional Planning Element**

The seven local jurisdictions in the Tri-Valley established the Tri-Valley Planning Committee (TVPC) in 1994 to prepare a Subregional Planning Strategy.<sup>125</sup> The Strategy recommends subregional policies and programs for location and intensity of urban development, natural resources, transportation, housing (including affordability), and economic development. (See D. Tri-Valley Subregional Planning Strategy, below.) The recommendations of the Strategy have been integrated into the Pleasanton General Plan and serve as the basis of the Subregional Planning Element. The provisions of the specific plan for infrastructure, public services, housing affordability, and growth management respond to the direction set forth in the Subregional Planning Strategy and the Pleasanton General Plan.

## **6-2. PLANS OF OTHER GOVERNMENT AGENCIES**

### **A. Alameda County**

Consistency with the general plan for Alameda County is a consideration that applies to Alternative 3, the County's adopted specific plan. It is Alternative 3 that reflects the proposed Cooperative Plan as it would take shape within the unincorporated county rather than within the City of Pleasanton. The CEQA analysis of Alternative 3 has been previously considered in County documents, including the DEIR (March 1995), the Recirculated DEIR (October 2, 1995) and the FEIR (June 1996). The interested reader may refer to those County reports for a discussion of consistency with the ECAP; that discussion is not duplicated in this City of Pleasanton EIR.

The City specific plan includes a segment of the Alameda County transportation corridor, which is 100 feet wide along the east side of the project site. The transportation corridor is the subject of ongoing Alameda County studies that may establish a historic train, the Niles Canyon Railway, along a 12-mile route between Fremont and Pleasanton.<sup>126</sup> A regional pedestrian/bike trail would also be included in the corridor. These transportation projects are being considered by County agencies.

The rail proposals would require (1) minor regrading of the roadbed to restore it to an operational condition and to provide for a future trail, (2) reinstallation of 2.8 miles of track and ties between Verona Road (about 0.9 miles south of the I-680/Sunol Boulevard interchange) and Spring Street in downtown Pleasanton, and (3) reconstruct or upgrade as necessary all at-grade street and other crossings to California Public Utilities Commission (and other applicable) standards. Bike path crossing improvements may also be needed.

The proposed specific plan would give the transportation corridor a transportation designation for planning and zoning purposes in order to accommodate future transportation use. This EIR address the rezoning of the project segment of the corridor to a transportation designation and the annexation of the project segment to Pleasanton. The proposing agency or agencies would be responsible for CEQA review of any project(s) within the corridor.

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<sup>125</sup> Tri-Valley Planning Committee, *Tri-Valley Subregional Planning Strategy*, October 30, 1995.

<sup>126</sup> Niles Canyon Railway, Pleasanton Extension: Request for Proposals, Expanded Initial Study/Negative Declaration, Alameda County Public Works Agency, September 1993.



## **B. Congestion Management Plan**

Pleasanton's planning procedures include review by the Congestion Management Agency (CMA) of all projects exceeding a certain threshold. As noted above, the CMA has submitted comments in response to the NOP for this draft EIR as well as comments on Alameda County's Draft EIR (March 1995) and Recirculated Draft EIR (October 1995) for this site, requesting that the environmental analysis address several specific issues having to do with impacts on the transportation and transit systems that would be affected by the project. The impact analysis presented in Chapter 5, Part J (Transportation) responds to that direction.

The CMP is not a policy document: it functions essentially as a capital improvements plan for Alameda County. As indicated in the CMA letter, the Regional Transportation Plan is a financially-constrained list of transportation expenditures for the next 20 years. It does not include improvements to I-680 in the vicinity of the project nor does it include interchange improvements at Sunol Boulevard or Bernal Avenue (that is, state or federal funding is not currently allocated to these projects). The circulation assumptions and analysis of the 1996 General Plan are not inconsistent with the provisions of the CMP. It is, therefore, the judgment of City staff that the circulation element of the 1996 Pleasanton General Plan is consistent with the CMP.

## **C. Tri-Valley Transportation Plan (TVTP)**

The transportation analysis presented in Chapter 5, Part J, analyzes the project in the context of projected future land use in Pleasanton as identified in the 1996 General Plan. The General Plan EIR found potentially significant regional transportation impacts resulting from the scale of future anticipated development in Pleasanton: Impact B2 identified excessive traffic loads on parts of I-580 and I-680 stemming in part from Pleasanton's pattern of employment and residence.

Development under the Cooperative Plan or the Preferred Plan would include a lower level of development than was assumed in the General Plan. Adverse cumulative impacts of development associated with the specific plan site may still occur (e.g., contribution to excessive traffic on regional routes; see discussion in Chapter 7, Part A) but transportation impacts would be reduced. The reduction would be approximately proportional to the reduction in the proposed specific plan development program. While the relationship between jobs and employed residents would alter from that anticipated in the General Plan, that change would improve the relationship forecast in the General Plan EIR.

Overall, the Cooperative or Preferred Plan would reduce the level of regional transportation impacts identified in both the Tri-Valley Transportation Plan and the General Plan. The development program proposed would, in that sense, not only be consistent with the TVTP but tend to contribute to a future condition that, while not mitigated to a level of insignificance, would be less adverse than the planning documents anticipated.

## **D. Tri-Valley Subregional Planning Strategy**

The *Tri-Valley Subregional Planning Strategy* is the product of a cooperative effort among the Cities of Livermore, Pleasanton, and San Ramon, the Town of Dublin, and the Counties of Alameda and Contra Costa to identify common planning issues and coordinate their policies. This joint effort was conducted under the aegis of ABAG's Collaborative Subregional Planning Program, which received an award from the Northern Section of the California Chapter of the American Planning Association in 1995 for "Outstanding Effort in Furthering Intergovernmental Planning and Cooperation."

The *Strategy* (October 30, 1995) identifies ABAG's *Projections '94* as the future development conditions in the Tri-Valley subregion underlying the planning efforts of the seven jurisdictions. It then presents a statement of subregional infrastructure and public service policies with which local policies are to be aligned.

In general terms, Pleasanton's policies, as articulated in the City's 1996 General Plan Update, reflect the direction indicated in the subregional planning strategy. The specific plan carries that relationship forward. It would:

- impose a reduced burden on regional infrastructure and public services as compared with the potential for more intense development proposed earlier under the 1986 General Plan;
- recognize the subregion's limited water supply and the constraint on wastewater export capacity, and seek to address those conditions with a combination of minimizing the demand for water through water conservation practices and wastewater reuse (see Chapter 5, Parts C and D);
- comply with solid waste source reduction requirements;
- designate a site for a new elementary school;
- respond to the housing affordability direction given in the Subregional Planning Strategy by implementing the housing affordability provisions of the Cooperative Plan Agreement; and
- incorporate development proposed under the specific plan into the City's on-going growth management program, as described in the Cooperative Plan Agreement.

The Subregional Planning Strategy did not report "major service shortfalls of subregional importance" in other public services but suggests that the provision of these services – police, fire, parks, and child care – be addressed at the time local governments are considering development proposals:

- The analysis of police, fire and parks (Chapter 5, Parts F, G, and H, respectively) reflects the provisions of the site plan and prospective development agreement with regard to these facilities and services.
- Child care is not a CEQA issue. However, the specific plan does respond to the need for child care facilities by allowing for location of child care facilities (by making such facilities a permitted use) in conjunction with large work centers, at transit sites, and/or adjacent to schools and playground. The sites proposed under the Cooperative and Preferred Plans would meet this locational criterion.

In summary, the planning provisions of the specific plan reflect the concerns articulated in the Subregional Planning Strategy.



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## CHAPTER 7

### CUMULATIVE AND GROWTH-INDUCING IMPACTS

#### A. CUMULATIVE IMPACTS

##### 1. Cumulative Framework

###### a. CEQA Requirements

The California Environmental Quality Act (CEQA) requires that EIRs contain an evaluation of a project's cumulative impacts. Cumulative impacts occur when the environmental effects of the proposed project, in conjunction with impacts resulting from other closely-related past, present, or reasonably foreseeable future projects, increase project impacts or combine to yield new impacts. Cumulative impact analysis is based on the recognition that the environmental impacts of a proposed project cannot be considered in a vacuum. Rather, changes in the environment could result from the incremental impact of what could be two or more individually minor but collectively significant projects taking place over a period of time.

###### b. Background

This EIR addresses the rezoning of, and specific plan and development agreement for, the site known as the San Francisco Water Department's "Bernal property," and annexation of a slightly larger area, that has been planned for development by the City of Pleasanton for many years. The development of this site has already been assumed in planning efforts undertaken by the City of Pleasanton and by subregional agencies. Pleasanton's General Plan, which designates the area for preparation of a specific plan, took account of the development potential of the site in looking ahead to its future land use patterns, population, housing, and employment when its General Plan was comprehensively updated in 1986 and again in 1996.

###### c. Approach

Given that development of this site has so long formed part of Pleasanton's planning program, the cumulative impacts of the development of the site have, for the most part, been accounted for in the City's land use planning, transportation planning, and infrastructure and public services planning for the area. Overall future development in Pleasanton, including development of this site, has been incorporated into the impact analysis presented in Chapters 4 through 6 of this document. In identifying cumulative impacts, the issue addressed is whether the development of this site would have additional, new cumulative effects not already accounted for in previous land use, transportation, infrastructure and public services planning, or in the other environmental topics addressed in this report.

##### 2. Assessment of Cumulative Impacts

Each of the impact areas is discussed below, under the same alphabetic heading as in Chapter 5.

a. Land Use. The cumulative land use impacts of the development of the study area have been addressed in the Pleasanton General Plan and in the environmental impact report on that plan. The level of development permitted by all of the specific plan alternatives evaluated in this EIR (described in Chapters 2



and 3) is contained within the level considered in that earlier planning effort and its environmental review. No new cumulative land use impacts relating to urban land uses (e.g., employment, population and housing) would be associated with the rezoning, annexation, and specific plan adoption actions now proposed.

Conversion of the site to urban use would reduce the amount of land available to agriculture. Some 400 acres of the site have been used in recent years for dryland farming of livestock feed; as noted in Chapter 5, Part A (Land Use), as many as 500 acres could be classified as prime agricultural land. The loss of these lands would, in combination with conversion of other agricultural lands in Alameda County, represent a cumulative impact.

<b>Cumulative Impact A: Land Use</b>	<b>The loss of prime agricultural land would, in combination with conversion of other agricultural lands in Alameda County, represent a cumulative impact. (Same as Impact A3.)</b>
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**b. Infrastructure Systems: Drainage.** As noted in Chapter 5, development of the site will result in a slight cumulative increase in peak flow in the Arroyo, especially in storms larger than the 100-year event.

<b>Cumulative Impact B1: Drainage</b>	<b>Runoff from the site under the 100-year flood may contribute to cumulative downstream flooding and channel erosion if onsite facilities are improperly sized or managed.. (Same as Impact B1.)</b>
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Pleasanton's infrastructure planning systems have incorporated into their capital facilities planning the ultimate development of the proposed annexation area under scenarios similar to those set forth in Chapter 3 of this report. The direction of local infrastructure planning has been to prepare the City to manage the effects of buildout of this site in conjunction with other development envisioned in the General Plan. Part of the program to manage storm water runoff includes provision for retention of storm water onsite to avoid adverse downstream impacts during storm events. With this provision implemented, the project would not contribute to cumulative stormwater runoff.

The present capacity of the Arroyo de la Laguna is considered by Zone 7 to be inadequate to meet potential future flood control needs. The type and timing of a future flood control project within the reach of the Arroyo included within the specific plan have not been determined. The specific plan would make no net contribution to flood control capacity needs and is designed to accommodate a range of flood control improvements within the Arroyo (see Chapter 4, Option 5). It remains possible, however, that the site plan proposed for this project may limit or constrain other Zone 7 options.

<b>Cumulative Impact B2: Drainage</b>	<b>Development of the project could conflict with implementation of future Zone 7 regional flood control plans for the Arroyo de la Laguna south of the Bernal Avenue bridge.</b>
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**c. Infrastructure Systems: Water.** Development in the study area would obtain water from the City of Pleasanton's supplies and treatment/delivery system (including arrangements with other agencies, such as Zone 7). Irrigation of the golf course could use either groundwater or, when available, recycled water.

**(1) Water Supply.** Pleasanton's infrastructure planning systems have incorporated into their capital facilities planning the ultimate development of the annexation and specific plan areas under development scenarios that anticipate more intensive development than would be permitted in the Cooperative Plan or

the Preferred Plan, so that the study area's water demand would be less than that reflected in capital facilities planning based on General Plan development levels.

The project's proposed use of groundwater for golf course irrigation, and potential use of recycled water for golf course and landscape irrigation, would further reduce demand on potable water supplies from Zone 7. Nevertheless, full buildout of Zone 7's water service planning area will require augmentation of its currently-identified water sources (see discussion in Chapter 5). Pleasanton's water system planning takes account of growth on this site in combination with other forecast growth in the water service planning area, but does not identify water supply for development on each potentially-developable site within the Zone 7 service area nor allocate supplies to each site. The specific plan, by drawing on Zone 7 supplies through the City of Pleasanton, would contribute to that need for augmenting Zone 7's water supply resources.

<b>Cumulative Impact C1: Water Supply</b>	<b>The water demand of the specific plan project, together with demand generated by other future development, would contribute to Zone 7's need to expand its available water resources in order to meet buildout water needs of its service area. (Same as Impact C1.)</b>
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**(2) City Water System: Distribution.** The Pleasanton Water Master Plan provides for the development of a water distribution system adequate to serve the full complement of development permitted by the City's General Plan. Because the amount of development permitted by either the Cooperative Plan or the Preferred Plan would be less than the amount assumed in the General Plan, the City's distribution system would have sufficient capacity to serve the site.

Although potential development of the study area is accommodated by the planned buildout of the water distribution system, actual development will contribute to the absorption of existing capacity and move Pleasanton toward the time when additional system elements must be built to accommodate citywide growth. The payment of standard connection fees by new development on the site will assure that the City has the ability to complete the distribution system to provide an appropriate citywide standard of service.

<b>Cumulative Impact C2: Water Distribution System</b>	<b>The water demand of the specific plan project, together with demand generated by other future development, would contribute to the City of Pleasanton's need to expand its water distribution system in order to meet buildout water needs of its service area. (Same as Impact C2.)</b>
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**(3) City Water System: Storage.** The Water Master Plan also provides for the development of a water storage system that is adequate to serve the future City of Pleasanton. The cumulative impact of development on the specific plan site on the water storage system is similar to its impact on the water distribution system: such development will contribute to absorption of existing capacity and move the City toward the time when new storage facilities must be built to serve additional growth. The payment of standard connection fees by new development will assure that the City has the ability to complete the storage system to maintain an appropriate citywide level of service.

<b>Cumulative Impact C3: Water Storage Capacity</b>	<b>The water demand of the specific plan project, together with demand generated by other future development, would contribute to the City of Pleasanton's need to expand its available water storage capacity in order to meet buildout water needs of its service area. (Same as Impact C3.)</b>
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**(4) *Groundwater.*** Groundwater would be used for irrigation of non-greens and -tees portions of the golf course until such time as recycled water is available. It is not clear whether groundwater withdrawals from wells on the project site, formerly used for agricultural irrigation, were ongoing at the time the safe yield was calculated. Regardless of whether such withdrawals were included in the safe yield estimate, however, any future groundwater withdrawals on the project site would contribute to areawide use of groundwater sources, which could cumulatively exceed the safe yield of the basin.

<b>Cumulative Impact C4: Groundwater</b>	Use of groundwater for irrigation in the specific plan project area, together with demand generated by other future development, would contribute to groundwater withdrawals from the Central Basin, which could exceed the estimated safe yield of the basin.
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**d. *Infrastructure Systems: Wastewater.*** Development in the study area would connect to the City of Pleasanton's wastewater collection and treatment/disposal system (including arrangements with other agencies, such as DSRSD and LAVWMA). The wastewater conveyance, treatment and export analysis in Chapter 5 takes account of growth on this site in combination with other forecast growth in the wastewater planning area.

**(1) *Wastewater Collection.*** Pleasanton's infrastructure planning systems have incorporated into their capital facilities planning the ultimate development of the proposed annexation area under development scenarios that anticipate more intensive development than would be permitted in the alternatives described in Chapters 2 and 3 of this report. The direction of local infrastructure planning has been to prepare the City to manage the effects of buildout of this site in conjunction with other development envisioned in the General Plan. Therefore, no cumulative impact on the wastewater collection system is anticipated.

**(2) *Wastewater Treatment.*** As shown in Table 18, Pleasanton currently has sufficient capacity entitlements at the DSRSD plant to accommodate development that would be permitted on the project site. As development continues throughout the City, however, in accordance with the General Plan, the demand for wastewater treatment capacity generated by all new development would exceed the amount of capacity available at the existing plant.

<b>Cumulative Impact D1: Wastewater Treatment Capacity</b>	Increase in wastewater flows generated by the project site, in conjunction with wastewater flows generated by other Pleasanton projects, could contribute to a possible future shortfall of treatment capacity at the WWTP. (Same as Impact D2.)
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**(3) *Wastewater Disposal.*** As with water supply planning efforts in the region, wastewater export capacity has not been identified for the full complement of potential development in the service area. Therefore, in addition to the project-level wastewater impact that would occur with the development of this site, the text of Chapter 5 describes a condition in which subregional capacity to export treated effluent will require augmentation in order to support full buildout of the wastewater planning area.

<b>Cumulative Impact D2: Wastewater Export Capacity</b>	The wastewater export demand of the specific plan project, together with demand generated by other future development, would contribute to an impending shortfall of Pleasanton's export capacity at the LAVWMA facilities. (Same as Impact D3.)
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**e. Public Services: Education.** The Pleasanton Unified School District accepts as its mission the education of all school-aged children residing within its boundaries; therefore, it has planned for the addition of new facilities that will be needed to accommodate additional enrollment as it occurs. Nevertheless, cumulative impacts on the adequacy of district facilities will occur if schools are not built in a timely manner to accommodate the new students who would live in the study area.

The project has agreed to provide a site for a new elementary school within the project boundaries. Development in the project area will be required to pay impact fees at the same rate as other properties in the City of Pleasanton, subject to agreement between the City School District and Master Developer giving consideration to the designation and acquisition of a school site. Pleasanton's Growth Management Program, which is intended to provide the capital facilities needed to serve added population, and the City's demonstrated willingness to require payment of impact fees indicates the City's commitment to securing funding for new school capacity. If the mitigation measures recommended in Chapter 5, Part E (Public Services: Education) are implemented, the project will provide for its own demands for elementary and middle school capacity, and will not contribute the cumulative impact of future growth on school facilities.

**f. Public Services: Police.** There would be no cumulative adverse impact on police services as a result of rezoning and annexation or development of the site consistent with any of the alternatives considered in this EIR.

**g. Public Services: Fire Protection.** Provision of a site for a fire station within the project boundaries will assist the Livermore/Pleasanton Fire Department in implementing its plans for comprehensive fire protection of the City. Nevertheless, development on the project site will contribute to cumulative impacts on the department's ability to respond to emergency calls within a five-minute response time throughout the service area. Construction and operation of a fire station on the site provided will mitigate this cumulative impact for first-response station, but not for second- and third-response stations.

<b>Cumulative Impact G: Fire Protection</b>	<b>Cumulative increase in demand for fire protection services, leading to increase in response times from second- and third-response fire stations.</b>
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**h. Public Services: Recreation and Parks.** The demand for additional park and recreational facilities generated by subsequent development of the site in conjunction with other development throughout the City that is permitted by the General Plan has been incorporated into the City's planning process, including the Growth Management Program.

As noted in Chapter 5, the project by itself is not considered to have an adverse impact on demand for regional park and recreation resources. Because less development would be permitted on this site than was assumed in the General Plan EIR, and that analysis found no cumulative impact on regional (non-City) park and recreational resources in light of the amount of population growth foreseen, this project would not have a significant adverse impact.

**i. Public Services: Library.** There would be no cumulative adverse impact on library services as a result of rezoning and annexation or development of the site consistent with any of the alternatives considered in this EIR.



**j. Transportation.** The analysis of cumulative transportation impacts is presented in Chapter 5, Part J. Because the Cooperative Plan and the alternatives propose a lower level of residential and commercial development than was assumed in the General Plan, development under the specific plan would reduce the General Plan's cumulative impacts on the regional transportation network to less than that forecast under the General Plan and the Alameda County Congestion Management Plan. Impact mitigation fees under the Tri-Valley Transportation Plan (TVTP) would be correspondingly reduced.

Because the Tri-Valley Transportation Plan does not provide adequate capacity to serve fully all future transportation needs at its established service standards, cumulative impact on the regional transportation system would remain, even when all fees are paid (assuming they are adopted). The development of the proposed site will contribute to that cumulative impact. Transportation impact fees paid by development on the site would contribute to financing of improvements included in the Tri-Valley Transportation Plan; all together, however, fees paid by all development projects would not fully provide for the meeting of the TVTP's service standards.

<b>Cumulative Impact J1: Transportation</b>	<b>Cumulative contribution of traffic to the road network and freeway ramps in the vicinity of the project site. (Same as Impact J9.)</b>
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<b>Cumulative Impact J2: Transportation</b>	<b>Cumulative contribution of traffic to the regional transportation system. (Same as Impact J10.)</b>
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**k. Air Quality.** The air quality analysis set forth in Chapter 5 takes account of expected regional/cumulative increases in vehicular travel. The discussion in that chapter notes that the DEIR on the East County Area Plan (ECAP), which provides the basis for some of the analysis in this report, projects the effects of cumulative development. It notes that current projections anticipate a decrease in regional emissions of ozone precursors in the future, despite cumulative growth in population and vehicle use, due to regional programs for reducing emissions that are in place or currently being considered. It further notes that (1) the predicted trend for ozone precursors is a continuation of the gradual decline in emissions that has been occurring for the last 20 years, and (2) the ECAP analysis predicts a gradual increase in PM-10 emissions from vehicles, assuming no new control programs for PM-10 from vehicles that could be implemented in the future by the BAAQMD or the California ARB.

The analysis in Chapter 5 concludes, however, that, notwithstanding anticipated declines in pollution levels, regional emissions will exceed the levels considered acceptable by the BAAQMD.

<b>Cumulative Impact K: Air Quality</b>	<b>The project would contribute to regional emissions well in excess of the thresholds of significance recommended by the Bay Area Air Quality Management District. (Same as Impact K2.)</b>
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**l. Noise.** Noise impacts are generally site-specific: at a distance of 50 feet from the source of the noise, they are likely to increase ambient noise levels from other sources by only 3 dB. Traffic associated with development on the site, in combination with existing and future background traffic, is not expected to create adverse noise conditions affecting existing or future development in the vicinity of the project area. Therefore, development of the project site is unlikely to have any cumulative impact on noise levels in the area.

**m. Cultural Resources.** As sites throughout the Tri-Valley and Alameda County are developed, the historical and cultural resources currently located on those sites could be adversely affected and the cumulative impact would be removal of much of the existing evidence of the area's cultural heritage.

<b>Cumulative Impact M: Cultural Resources</b>	<b>Potential contribution to removal of existing evidence of the cultural heritage of the Tri-Valley and Alameda County through (1) disturbance or removal of historical and/or cultural sites or (2) making such sites inaccessible as a result of development.</b>
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**n. Visual Resources.** In the present condition, agricultural use of the site affords a pleasing open space vista from I-680 as it traverses the study area. The loss of this rural vista would contribute to the cumulative loss of such vistas in the urbanizing parts of the Bay Area. However, if project mitigation of visual impacts is accomplished as specified in Chapter 5, cumulative visual impacts are judged to be less-than-significant, primarily because the vista afforded by the project would not have, in terms of CEQA Guidelines, Appendix G, "a substantial demonstrable negative aesthetic effect."

**o. Biology.** The discussion of biological resources in Chapter 5 indicates that the site has been highly disturbed over time. With the exception of the Arroyo de la Laguna corridor, the site is not at present an important biological resource. Much of the vegetation is non-native, and the fact that the site has been actively farmed and is surrounded by urban uses would tend to discourage the establishment on it of special status plants and animals.

The analysis described in Chapter 5 identifies disturbances to the riparian habitat of the Arroyo and the finger tributary, adverse effects of wetlands, and loss of heritage trees as project impacts. In combination with similar effects of other development projects throughout the Tri-Valley, these project impacts contribute to cumulative impacts on the same resources.<sup>127</sup>

<b>Cumulative Impact O1: Biology</b>	<b>Loss of riparian habitat on the project site, in combination with losses attributable to other development projects in the Tri-Valley and Alameda County, would represent a cumulative impact.</b>
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<b>Cumulative Impact O1: Biology</b>	<b>Loss of wetlands on the project site, in combination with losses attributable to other development projects in the Tri-Valley and Alameda County, would represent a cumulative impact.</b>
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<b>Cumulative Impact O3: Biology</b>	<b>Loss of heritage trees on the project site, in combination with losses attributable to other development projects in the Tri-Valley and Alameda County, would represent a cumulative impact.</b>
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<sup>127</sup> In particular, as noted in Chapter 5, Part O (p. 286), "even if loss of a particular area is found to be mitigatable on the site, all losses of jurisdictional wetlands are cumulative."



**p. Public Health and Safety.** Development of the site will result in the use of pesticides on the golf course, parks, other public landscaped areas, and private yards. As noted in Chapter 5, Part P, improper application of chemicals or rainfall soon after such application, resulting in runoff that carries chemicals into surface water and water storage areas, could affect downstream water supplies. Chapter 5 recommends measures to mitigate impact. In combination with other potential sources, however, this project could contribute to pollution of downstream water supplies.

<b>Cumulative Impact P1: Public Health and Safety</b>	<b>Potential exposure of future Alameda County residents and workers to possible water contamination.</b>
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**g. Geology, Soils, and Seismic Safety.** Eventual development of the site would introduce greater population within an area that is subject to seismic events. This impact would necessarily be site- and project-specific: whether development occurs on this site will not affect the exposure of other development on other sites to seismic risk. Therefore, no cumulative impact is expected.

**r. Energy.** The development of the site encompassed by the rezoning and annexation project would contribute to cumulative energy demand. However, in the absence of development of this site, that contribution would most likely be displaced to another site in the same region, rather than being eliminated. Therefore, while the project would have a cumulative energy impact, it is not judged to be significant.

## **B. GROWTH-INDUCING IMPACTS**

### **1. Growth Inducement Framework**

#### **a. CEQA Requirements**

The State CEQA Guidelines (§15126(g)) indicate that EIRs should address whether the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.

#### **b. Background**

This EIR addresses the rezoning of a site, and annexation of a slightly larger site, that has been planned for development by the City of Pleasanton for more than 30 years.<sup>128</sup>

The development of this site has already been assumed in planning efforts undertaken by the City of Pleasanton and by subregional agencies. Pleasanton's General Plan, which designates the area for preparation of a specific plan, took account of the development potential of the site in looking ahead to its future buildout condition when its General Plan was comprehensively updated in 1986 and again in 1996, and it is specifically included in the Housing Element (General Plan, Chapter IV).

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<sup>128</sup> City of San Francisco (Rick Nelson) notes the City's participation in the West Pleasanton Sewer Assessment District in 1963.

### **c. Approach**

The area proposed for annexation (and eventual development) would occupy a site that has previously been occupied by agricultural uses or remained in open space. Development within the study area would allow growth in that area, in the amount permitted by the plan that is ultimately adopted (subsequent to the pre-zoning and annexation described in this EIR, and consistent with the range of specific plan scenarios addressed in this report).

Given that development of this site has long formed part of Pleasanton's planning program, future growth on this site has been taken account of in planning for the City's future infrastructure and public services.

The growth that would be accommodated by future development of the study area would be approximately 5,430 additional City residents. For reference, this population equals approximately nine percent of Pleasanton's current population (57,800 as of January 1, 1996, according to State Department of Finance estimates).

In addition, the site would accommodate new employment. With up to 577,000 square feet of commercial and retail space in all plan alternatives, the site would accommodate an estimated 1,910 jobs, depending on the specific type of space constructed and the intensity of its use (square feet per worker). This employment level would represent an increase of approximately six percent in Pleasanton's current job count (the City's 1996 Growth Management Report Update estimates 34,144 jobs within the Pleasanton sphere of influence in 1996).

## **2. Assessment of Growth-Inducing Impacts**

The project's contribution to local growth should be considered in light of the following questions:

- Would the opening up of the study area to development represent "new" growth, or an addition to Pleasanton's population and job base already incorporated into the City's planning effort?
- Is it "infill," or would the development or the infrastructure system foster growth in other areas?

The Pleasanton General Plan, and the City's infrastructure planning effort that supports it, generally take account of the future development of the EIR study area in looking toward the future population and employment the City will serve. The annexation area is not "new" growth, from the point of view of the City's planning efforts, because it has been envisioned for future development since at least 1986. The infrastructure that would serve the site is largely in place, or included in the City's ongoing capital facilities planning efforts (see Chapter 5, Parts B, C, D, H, and J).

While the study area is not the only potential growth area in Pleasanton, it does represent one of the largest areas (probably the largest area) of mostly-level land in close proximity to transportation facilities and to the downtown. It offers advantages of efficiency in land use patterns that stem from its location, since trip distances to a variety of complementary kinds of land uses would be shorter, given that location, than would be the case with undeveloped sites farther away from downtown Pleasanton, freeway interchanges, local employment sites, and the new BART station.

In terms of Pleasanton's jobs/housing balance, the City began the decade of the 1980s with a surplus of employed residents over local jobs: the sphere of influence was reported to have about 1 job for every 2 employed residents (9,090 jobs; 17,385 employed residents). Job growth in the 1980s brought that ratio about even; by 1995, the City had reached approximate parity (estimated 34,144 jobs and 34,403 employed



residents). The ratio is forecast to move toward a surplus of jobs over housing, such that, at General Plan buildout, there would be about 1.5 jobs for each employed resident (see Chapter 5, Part A).

The development scenario considered in this EIR (the Cooperative Plan, with 1,910 jobs) would have about 0.63 jobs per employed resident. This ratio is less than half the ratio of 1.5:1 as is forecast for Pleasanton at General Plan buildout, and therefore would help bring the City's jobs/housing balance closer to parity.

Development of the site is not likely to stimulate significant offsite employment growth, since the area is already well-served by commercial and retail uses. Similarly, it is not expected to stimulate offsite housing growth, because the amount of development on the site would accommodate 1.6 employed residents per job (assuming the same average number of employed residents per household as the current average in Pleasanton; see Chapter 5, Table 6).

Based on these observations, it may be concluded that development of the site would not have adverse growth inducing impacts, and would very likely contribute to a more efficient overall pattern of population and employment within the City's present and future infrastructure and public services systems.

## CHAPTER 8

### OTHER ENVIRONMENTAL CONSIDERATIONS

#### A. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

This EIR identifies potentially significant environmental effects resulting from development that would be permitted by the specific plan. The EIR recommends mitigation measures that would reduce the potential impacts to less-than-significant levels, with the following exceptions:

- **Land Use.** Conversion of agricultural lands on the site to urban use, together with other such conversions in Alameda County, would be an unavoidable cumulative adverse impact.
- **Transportation.** Contribution of traffic to the regional transportation system would be an unavoidable project-level and cumulative impact. Roadway improvements associated with impact fees will not be sufficient to improve all freeway operations to adequate levels, and payment of fees alone will not provide sufficient funding for needed improvements. No feasible mitigation for these impacts has been identified.
- **Air quality.** Mass grading will generate dust and particulates. This impact is significant and unavoidable during the mass grading phase of the project, but is mitigatable in subsequent phases.

Project-related traffic will contribute to significant regional impacts on air quality. Land use, transportation and/or residential equipment-based strategies cannot be expected to reduce emissions to a level of insignificance.

- **Noise.** Proposed residential development in several areas of the project site would be exposed to exterior noise levels exceeding 60 dB Ldn. The General Plan allows for exposure to higher noise levels where mitigation to reduce noise to 60 dB is infeasible; if the standard of 60 dB is applied, however, this impact cannot be mitigated.

Exposure of some proposed outdoor recreation uses within the project area to noise levels exceeding the City's standards for such exposure would be a significant unavoidable impact. If a significance criterion of 60 dB L<sub>dn</sub> for outdoor noise in residential areas is adopted, then noise levels in some residential areas would be "conditionally acceptable" and interior noise mitigation would be required.

- **Visual Resources.** Development, including buildings and other features such as noise mitigation barriers, would eliminate the open, rural vistas of the site now available from I-680 and Bernal Avenue. This visual impact is unavoidable.
- **Seismic safety.** Risk to property and human life. Even with complete compliance with seismic safety policies and requirements, seismic risk to property and human life remains that cannot be fully mitigated.



The significance of the following impacts cannot be determined from information available at this time:

- **Public Services: Wastewater Treatment Capacity and Wastewater Export Capacity.** Because the future outcomes of efforts to expand the capacity of the DSRSD wastewater treatment plant and LAVWMA export capacity are not yet known, the significance of the project's impact on Pleasanton's ability to treat and dispose of effluent generated by new development cannot be assessed. If the capacity of both facilities is expanded before demand exceeds the capacity available to the City of Pleasanton, then the impact will be less-than-significant; if not, then other mitigations outlined in Chapter 5, Part D must be implemented or the impact will be significant.
- **Biology.** The removal of heritage trees located when development occurs would be an unavoidable adverse impact unless mitigation measures intended to preserve visual quality are implemented to supplement measures intended to minimize impacts on biological resources.

## **B. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WOULD BE INVOLVED IN THE PROPOSED PROJECT SHOULD IT BE IMPLEMENTED**

Development of the site as permitted by the specific plan would involve the consumption of non-renewable energy resources (natural gas, electricity, gasoline, other fuels) and the commitment of materials (such as wood, concrete, metal and plastic) during the construction and operation of the project.

Other impacts – such as the development of urban uses on a site that has been in agricultural use – would be irreversible in a practical sense; that is, they would be technically capable of being reversed, but the cost of doing so would make the likelihood of such a change very low. (For example, removal of all development, including streets, and return of land to a condition in which it could be used for agriculture is not considered likely.)

None of these changes constitutes a significant adverse impact as defined by CEQA.

## **C. ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT**

This EIR evaluates all of the environmental topics of potential concern identified in the City of Pleasanton Initial Study Environmental Checklist Form. The evaluation indicates that there would be no significant impacts (prior to mitigation) in the following areas:

- **Public Services: Police**
- **Public Services: Library**
- **Energy**

Impacts in the following areas could be significant prior to mitigation, but – with the exception of the specific impacts identified on p. 361 (and possibly those whose significance cannot be determined, on p. 362) – could be mitigated to a less-than-significant level:

- Land use
- Infrastructure Systems: Drainage, water, and wastewater
- Public Services: Education, fire protection, and parks and recreation
- Transportation
- Air Quality
- Noise
- Cultural resources
- Visual resources
- Biology
- Public health and safety
- Geology, soils, and seismic safety

#### **D. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY**

The use of the study area in the past has focused on agricultural production. As noted on the preceding page, the replacement of agricultural uses by urban development is effectively irreversible.

The proposed local short-term use of the site is urban development, including a mix of residential, office, commercial, recreation, and civic land uses. Such development would preclude the continuation of – or future reversion to – agricultural use, as well as short-term use for other types of development such as industrial activity.

Because the site is effectively surrounded by urban development and is within the urban growth boundaries designated by both Alameda County and the City of Pleasanton, continuation of agricultural production on the property is unlikely for the long term. Because the site is located well within the urbanized portion of the Bay Area, it is an infill site for housing and employment. The proposed project would effectuate the anticipated conversion of the site from agricultural uses to urban uses. In doing so, it would provide a mix of residential and employment opportunities that will improve the balance between jobs and housing in Pleasanton and, consequently, in the Tri-Valley.



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## **CHAPTER 9**

### **SOURCES**

#### **A. EIR CONTRIBUTORS**

##### **1. Lead Agency**

City of Pleasanton

Planning Department  
200 Old Bernal Avenue, P. O. Box 520  
Pleasanton, CA 94566-00802  
Coordinator: Brian Swift, Planning Director

Lead Agency's Consultants

Calthorpe Associates  
739 Allston Way  
Berkeley, CA 94710  
Coordinator: Bruce Fukuji

##### **2. EIR Consultant**

Mundie & Associates  
3452 Sacramento Street  
San Francisco, CA 94118  
Coordinator: Roberta Mundie, Principal  
Contributor: Suzanne Lampert, Senior Associate

##### **3. EIR Technical Consultants**

Traffic and Circulation

Fehr & Peers Associates  
3685 Mt. Diablo Boulevard, Suite 301  
Lafayette, CA 94549  
Coordinator: Robert E. Rees, P.E.

Noise

Illingworth & Rodkin  
85 Bolinas Road, #11  
Fairfax, CA 94930  
Coordinator: Rich Illingworth

Air Quality

Donald Ballanti  
Certified Consulting Meteorologist  
1424 Scott Street  
El Cerrito, CA 94530  
Coordinator: Donald Ballanti

Biology

Sycamore Environmental Consultants  
6355 Riverside Boulevard, Suite C  
Sacramento, CA 95831  
Coordinator: John Little



**Visual Simulations**

Environmental Vision, Inc.  
2550 Ninth Street  
Berkeley, CA 94710  
Coordinator: Marsha Gale

**Graphics Assistance**

Topo Design  
150 Ross Street  
San Rafael, CA 94901  
Coordinator: Mark Chambers

## **B. OTHER PERSONS AND ORGANIZATIONS CONTACTED**

### **1. Applicant**

**City and County of San Francisco**

San Francisco Water Department  
1155 Market Street, 5th Floor  
San Francisco, CA 94102  
Coordinator: Richard M. Nelson

San Francisco City Attorney's Office  
1390 Market Street, 6th Floor  
San Francisco, CA 94102  
Coordinator: Noreen Ambrose

**Applicant's Consultants**

The Planning Collaborative  
Pier 33 North  
San Francisco, CA 94111  
Coordinator: Jeffrey Grote

Lamphier & Associates  
77 Jack London Square, Suite K  
Oakland, CA 94607  
Coordinator: Scott Gregory

TJKM Transportation Consultant  
4637 Chabot Drive, Suite 214  
Pleasanton, CA 94588-2754  
Coordinator: Victor Siu

Dowling Associates, Incorporated  
180 Grand Avenue, Suite 995  
Oakland, CA 94612  
Coordinator: John Dowden

### **2. Government Agencies and Utilities**

Bengtson, Dolores, Director. Parks and Community Services Department, City of Pleasanton. Personal communication to Mundie & Associates, January -March, 1995 and April, 1997.

- Beougher, Dennis. City Attorney's Office, City of Pleasanton. Personal communication to Mundie & Associates, December 13, 1996.
- Boyken, Chris. Livermore/Pleasanton Fire Department. Personal communication to Mundie & Associates, March, 1997.
- Cusenza, Stephen S. Deputy Director of Utilities, City of Pleasanton. Personal communications to Mundie & Associates, January 16, 1995, December 13, 1996, and March, 1997.
- Curtner, Bert. Alameda County Agricultural Commission Office. Personal communications to County EIR preparers, August, 1988 and to Mundie & Associates, February, 1997.
- Eastman, William, Chief. Police Department, City of Pleasanton. Personal communication to Mundie & Associates, January 10, 1995.
- Elliott, Joe, former Pleasanton Public Works Director. Personal communication to The Planning Collaborative, 1992.
- Ewert, Don, Deputy. Alameda County Sheriff's Department. Personal communication to Mundie & Associates, January 23, 1995.
- Fraser, Michael, Lieutenant. Police Department, City of Pleasanton. Personal communication to Mundie & Associates, January 10, 1995.
- Gambs, Dennis. Zone 7, Alameda County Flood Control and Water Conservation District [ACFD], Personal communication to Greiner, Inc. [infrastructure consultant on RZ-94-07 Rezoning EIR], January 23, 1995.
- James, Bill J., Superintendent. Pleasanton Unified School District. Personal communication to Mundie & Associates, January 10, 1995.
- Jost, Wes. Public Works Department, City of Pleasanton. Personal communication to Mundie & Associates, March, 1997.
- Lee, Garry E., Utility Engineer, City of Pleasanton. Personal communications to Mundie & Associates, January 16, 1995 and December 11, 1996.
- Lindenmayer, T. H., Environmental Specialist. East Bay Regional Park District. Personal communications to Mundie & Associates, January-March, 1995.
- McCammon, Bill, Chief. Alameda County Fire Department. Personal communication to Mundie & Associates, January 20, 1995.
- McCurtain, Buster, Deputy Superintendent. Pleasanton Unified School District. Personal communication to Mundie & Associates, January 10, 1995.
- McElligott, Liz. Alameda County Planning Department. Personal communication to Mundie & Associates, February-March, 1995.
- Newey, Jim. Alameda County Agricultural Commission. Personal communication to Mundie & Associates, February 9, 1995.
- Rasmussen, Wayne, Principal Planner, City of Pleasanton. Personal communication to Mundie & Associates, January-March, 1995 and July-December, 1996.



- Rossi, Susan, Finance Director, City of Pleasanton. Personal communication to Mundie & Associates, January 13, 1995.
- Tollefson, Gary L., Captain. Police Department, City of Pleasanton. Personal communications to Mundie & Associates, January 1995.
- Van Gelder, Bill, Traffic Engineer. Public Works Department, City of Pleasanton, Personal communications to Mundie & Associates, January-March, 1995 and June 1996 through February 1997; personal communications to Fehr & Peers Associates, March 1997.
- Wallace, Jerry. Alameda County Planning Department. Personal communications to Mundie & Associates, January-March, 1995.
- Withers, George, Chief. Fire Department, City of Pleasanton. Personal communication to Mundie & Associates, January 10, 1995 and March, 1997.
- Wong, Vincent D. Assistant General Manager, Zone 7. Personal communication to Mundie & Associates, January 24, 1995 and letter to Mundie & Associates, December 13, 1996.

## C. PUBLICATIONS

- Alameda, County of. *East County Area Plan*. Adopted May 1994. (Cited in the text as "ECAP.")
- \_\_\_\_\_. ECAP EIR. Certified June 1993.
- \_\_\_\_\_. Final Environment Impact Report on *San Francisco Lands: Specific Plan for the Bernal Property* (cited in text as "County EIR"), June 1996. Included in the FEIR are the Draft Environmental Impact Report (March 1995) and the Recirculated Draft Environmental Impact Report (October 1995).
- \_\_\_\_\_. Request for Proposals, Expanded Initial Study/Negative Declaration: Niles Canyon Railway, Pleasanton Extension. September 1993.
- \_\_\_\_\_. *San Francisco Lands: Specific Plan for the Bernal Property*. Adopted August 1, 1996. (Cited in the text as "County specific plan").
- Alameda, County of, County Librarian. Letter from Linda Wood to Gerald Wallace, County Planning Department, dated February 3, 1995. Cited in County EIR, DEIR p. 4.8-12.
- Alameda, County of, Flood Control and Water Conservation District, Zone 7. Basic data files. 1990.
- \_\_\_\_\_. *Flood Frequency Analysis Program Update*. July 21, 1994, and August 1994.
- \_\_\_\_\_. Flood Control Base Map, Authorized Project Lines of Zone 7. 1988.
- \_\_\_\_\_. *Zone 7 Water Supply Planning Report*. Prepared for Zone 7 by Camp Dresser & McKee, Inc. January 1994.
- Alameda, County of, and Pleasanton, City of. *Cooperative Plan Recommendations, Bernal Property Development Plan*, Pleasanton, Alameda County and SFWD Staff, December 12, 1995. Presented as Exhibit C to Appendix B in the County EIR and as Appendix B in this EIR.
- Association of Bay Area Governments. *Projections 96*. December 1995.

- Barton-Aschman Associates, Inc.** *Tri-Valley Transportation Plan*. August, 1994.
- Burford, R. O. and R. V. Sharp.** *Slip on the Hayward and Calaveras Faults Determined from Offset Powerlines*. California Division of Mines and Geology Special Publication 62, 1982, p. 261-269.
- Burke, Robert B.,** Vice President and General Manager, Kaiser Center, Inc. Correspondence with Mr. Willy Tsai, Operations Manager, San Francisco Water Department. November 15, 1993.
- California Native Plant Society.** *Inventory of Rare and Endangered Vascular Plants of California*, 5th Edition. 1994.
- California, State of.** *California Environmental Quality Act and Guidelines*. 1992 (as amended).
- California, State of, Dept. of Conservation, Office of Land Conservation.** *Farmland Conversion Report*, 1990-92.
- California, State of, Department of Fish and Game.** *Natural Diversity Data Base*, record search of the Dublin and Livermore 7.5' Quadrangles. January 24, 1995.
- \_\_\_\_\_. *Natural Diversity Data Base, Special Animals and Special Plants*. 1995 (both).
- Coate, Barrie D. and Stewart Winchester.** *Preliminary Survey Results: Vegetative Analysis of Arroyo de la Laguna and Adjacent Lands*. July 1986. (Cited in text as *Vegetative Analysis*, Coate and Winchester, 1986.)
- Dibblee, T.W., Jr.** "Preliminary Geologic Map of the Dublin Quadrangle, Alameda and Contra Costa Counties, California." USGS Open File Report 80-537, 1980.
- Dublin-San Ramon Services District (DSRSD).** *Clean Water Revival: Recycling for Groundwater Replenishment*, DSRSD Project Update. February 1996.
- \_\_\_\_\_. *Livermore-Amador Valley Water Recycling Study*. Prepared for DSRSD by Brown and Caldwell. May 1992. Cited in text as "Recycling Study."
- Ellsworth, W. L., J. A. Olson, L. N. Shijo, and S. Marks.** *Seismicity and Active Faults in the Eastern San Francisco Bay Region*. California Division of Mines and Geology, Special Publication 62, p. 83-92. 1982
- Fairfield, Ted C., Consulting Civil Engineers.** Preliminary Site Analysis, City of San Francisco Property, Pleasanton, CA. July 11, 1986.
- Fehr & Peers Associates, Inc.** *Narrow Residential Streets: Do They Really Slow Down Speeds?* March 14, 1997.
- GeoResources, Inc.** "Preliminary Water Quality Results Pleasanton Lands" and "Confirmation of Water Quality Results Pleasanton Lands." Memoranda, February 14, 1994 and March 18, 1994.
- Harsh, P. W., and R. O. Burford.** "Alignment-Array Measurements of Fault Slip in the Eastern San Francisco Bay Area, California." In *Proceedings, Conference of Earthquake Hazards in the Eastern San Francisco Bay Area*, E. W. Hart, S. E. Hirschfield, and S. S. Schulz, eds., 1982, p. 251-260.



- Helley, E. J., K. E. Lajoie, and D. B. Burke. "Geologic Map of the Late Cenozoic Deposits in Alameda County, California." USGS Miscellaneous Field Studies Map MF-429 Basic Data Contribution 48, 1:62,500, 1972.
- Herd, D. B. "Map of Quaternary Faulting Along the Northern Calaveras Fault Zone, Las Trampas Ridge, Diablo, Dublin, Niles, and La Costa 7.5 Minute Quadrangles, California." USGS Open File Report 78-307, 1:24,000, 1978.
- Mason Tillman Associates, Ltd., "Cultural Resources Assessment of the San Francisco Water Department Properties, Pleasanton Specific Plan," 1988.
- Merrill, Seeley, Mullen, Sandefur, Inc. "Preliminary Geologic Evaluation of Surplus San Francisco Water Department Lands Parcels 5, 7 and 8, Pleasanton, CA." Unpublished consultant's report, June 1986.
- Pleasanton, City of. [Revised] Draft Design Guidelines, prepared by Calthorpe Associates, February 24, 1997.
- Pleasanton, City of. Draft and Final Environmental Impact Report, Rezoning RZ-94-07 and Annexation (Cited in the text as "City DEIR"). Draft published March 1995; Final, May 1996 [not certified].
- \_\_\_\_\_. *Community Trails Master Plan*, (Draft). Tito Patri & Associates, July 1993.
- \_\_\_\_\_. *Environmental Baseline Report*, San Francisco Water Department Specific Plan for San Francisco Public Utilities Commission Lands in the City of Pleasanton. Prepared for the San Francisco Water Department and the City of Pleasanton by The Planning Collaborative. November 1988.
- \_\_\_\_\_. *General Plan*. Adopted 1996.
- \_\_\_\_\_. *Growth Management Reports*. June 1993, August 1994, and Update September 1996.
- \_\_\_\_\_. *The Pleasanton Plan* [General Plan]. Adopted 1986.
- \_\_\_\_\_. *Scenic Highway Plan for Interstate 680 in the City of Pleasanton*, January 11, 1985.
- Pleasanton, City of, and Alameda, County of. *Cooperative Planning Process for the Bernal Property*. Adopted by the Pleasanton City Council, August 22, 1995; the Alameda County Board of Supervisors, August 29, 1995; and the San Francisco Public Utilities Commission, September 1, 1995. Presented as Exhibit A to Appendix B in the County EIR.
- Reed, P. B. *National List of Plant Species That Occur in Wetlands; California (Region O), National Wetlands Inventory*. U.S. Fish and Wildlife Service, Biological Report 88 (26.10), 1988.
- San Francisco, City and County of, Water Department. Basic data files. 1988.
- Sorenson, S. K., et al. *Water Quality Conditions and an Evaluation of Ground and Surface Water Sampling Programs in the Livermore-Amador Valley, California*. USGS, 1985.
- Sylvester, Marc A. *Land Application of Wastewater and Its Effect on Groundwater Quality in the Livermore-Amador Valley*. USGS. 1983. Cited in text as "Land Application."
- Sycamore Environmental Consultants. Memorandum to Mundie & Associates. October 15, 1996.

- Thompson and West.** "Official and Historical Atlas Map of Alameda County, 1878." 1878.
- TJKM Transportation Consultants, Inc.** *Traffic Counts for Baseline 1996 for City of Pleasanton.* June, 1996.
- TJKM Transportation Consultants, Inc.** Written correspondence to the City of Pleasanton. . March 13, 1997.
- TJKM Transportation Consultants, Inc.** Written correspondence to The Planning Collaborative. December 8, 1996.
- Tocher, D.** *Seismic History of San Francisco Region.* California Division of Mines and Geology Special Report 57, p. 39-48. 1959.
- Toppozada, T. R. and D. L. Parke.** *Area Damaged by California Earthquake, 1900-1949.* California Division of Mines and Geology, Open File Report 82-17 SAC. 1982.
- Toppozada, T. R., C. R. Real, and D. L. Parke.** *Preparation of Isoseismal Maps and Summaries of Reported Effects for Pre-1900 California Earthquakes.* California Division of Mines and Geology Open File Report 81-11 SAC. 1981.
- Tri-Valley Planning Committee.** *Tri-Valley Subregional Planning Strategy.* October 30, 1995.
- U. S. Government, Army Corps of Engineers (COE), San Francisco District.** *Upper Alameda Creek Hydrology Study.* Prepared for COE by Gill & Pulver Engineers. August 1982.
- \_\_\_\_\_. *Wetlands Delineation Manual.* Environmental Laboratory, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss., 1987.
- U. S. Government, Department of Agriculture, Soil Conservation Service, in cooperation with University of California Agricultural Experiment Station.** *Soil Survey of Alameda County, California.* 1966.
- \_\_\_\_\_. *Soil Survey of Alameda County, California, Western Part.* 1981.
- U. S. Government, Federal Emergency Management Agency (FEMA).** Flood Insurance Study of the City of Pleasanton - Flood Insurance Rate Map (revised). September 19, 1984.
- U. S. Government, Fish and Wildlife Service.** *Endangered and Threatened Wildlife and Plants; Animal Notice of Review,* Federal Register 50 CFR Part 17. 1994.
- Watson, Kent.** *Arroyo Management Plan.* 1985.
- Van Gelder, Bill,** Traffic Engineer, City of Pleasanton. Written Correspondence to Brian Swift, March 17, 1997 and March 19, 1997.
- Zentner and Zentner.** *Bernal Avenue, Section 404 Jurisdictional Delineation.* Prepared for The Planning Collaborative, February 2, 1995.





## **APPENDICES**

- A. Notice of Preparation of a  
Draft Environmental Impact Report**
- B. Cooperative Plan Agreement**
- C. Excerpt from the County DEIR:  
Land Use Alternatives Considered and Rejected**
- D. Air Quality Methodology and Assumptions**
- E. Fundamental Concepts of Acoustics**
- F. Memorandum: Heritage Tree Survey**
- G. Visual Simulation Methods**







## APPENDIX A

# CITY OF PLEASANTON

P.O. BOX 520 PLEASANTON, CALIFORNIA 94566-0802

### CITY OFFICES 123 MAIN STREET

CITY COUNCIL  
484-8001

CITY MANAGER  
484-8008

CITY ATTORNEY  
484-8003

CITY CLERK  
484-8235

FINANCE  
484-8033

PERSONNEL  
484-8012

### CITY OFFICES 200 OLD BERNAL AVE.

PLANNING  
484-8023

ENGINEERING  
484-8041

BUILDING INSPECTION  
484-8015

COMMUNITY SERVICES  
484-8160

WATER - BILLING  
484-8038

FIELD SERVICES  
3333 BUSCH RD.

SUPPORT SERVICES  
484-8067

PARKS  
484-8056

SANITARY SEWER  
484-8061

STREET  
484-8066

WATER  
484-8071

FIRE  
4444 RAILROAD AVE.  
484-8114

POLICE  
4833 BERNAL AVE.  
P.O. BOX 909  
484-8127

## Subject: Notice of Preparation of a Draft Environmental Impact Report

### Lead Agency:

City of Pleasanton Planning Department

Street Address: 200 Old Bernal Avenue

P. O. Box 520

Pleasanton, California 94566-0802

Contact: Brian Swift, Director of Planning  
and Community Development  
(510) 484-8026

The City of Pleasanton Planning Department will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study is not attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but *not later than 30 days* after receipt of this notice.

Please send your response to Brian Swift, Director of Planning and Community Development, at the address shown above. We will need the name for a contact person in your agency.

### Project Title:

SP-95-02, Specific Plan, Development Agreement, and Pre-zoning of the San Francisco Water Department (SFWD) Bernal Avenue Property and Portion of the Alameda County Transportation Corridor; and Annexation of the SFWD Property, Transportation Corridor, and Certain Property Owned by the Pleasanton Unified School District



The City Council reserves the right to abandon this City-initiated specific plan and annexation, should it decide to do so at a future date.

The proposed specific plan, development agreement, and pre-zoning are preliminary to City of Pleasanton application to LAFCO for Annexation No. 141 (SFWD, Alameda County, and Pleasanton Unified School District properties).

Date December 27, 1995

Signature Brian W. Swift  
Brian W. Swift

Title Director of Planning  
and Community Development

Telephone (510) 484-8026

# Notice of Preparation

## Project Description, Location, and Potential Environmental Effects

### Project Description:

The project includes a number of separate actions which will lead to the annexation to Pleasanton and development of the San Francisco Water Department lands. These are described below:

- SP-95-02 - A Specific Plan developed for the 508-acre, San Francisco Water Department Bernal Property which would include 1600-1900 residential units, 577,000 square feet of office/commercial development, a golf course, elementary school, parks, flood control improvements, and associated uses/improvements. The plan would incorporate the elements of the "Pleasanton, Alameda County, and SFWD Staff Cooperative Plan Recommendations - Bernal Property Development Plan - December 12, 1995," attached.
- PUD-95-08 - A pre-zoning to the Planned Unit Development (PUD) district and master development plan approval for the 508-acre, San Francisco Water Department Bernal Property, setting forth the master development pattern for the site, and pre-zoning for the six-acre Alameda County transportation corridor, consistent with the Specific Plan.
- A development agreement incorporating the elements of the Specific Plan and PUD development plan, potentially requiring approval by Pleasanton, Alameda County, and the City and County of San Francisco.
- Annexation No. 141 - Annexation of the unincorporated portions of the San Francisco Bernal Property, the Alameda County Transportation Corridor, and the Pleasanton Unified School District's Pleasanton Middle School into the City of Pleasanton.

### Project Location:

The project is located on a triangular-shaped site of approximately 550 acres bounded by the Arroyo de la Laguna to the west, Bernal Avenue to the north, and the easterly edge of the transportation corridor/Case Avenue to the southwest in or adjacent to the City of Pleasanton, Alameda County.



### Potential Environmental Effects

Upon initial review, it was determined this project would require an EIR, so no Initial Study was prepared. Two earlier EIRs will be used as key information sources: the City of Pleasanton prepared "Environmental Impact Report - Rezoning RZ-94-07 and Annexation, City of Pleasanton, dated March 1995," (State Clearinghouse #94-123050), and the Alameda County prepared "Environmental Impact Report - Specific Plan for the Bernal Property, dated March 1995," (State Clearinghouse #94-103029). Both are available for review at the Pleasanton Planning Department, 200 Old Bernal Avenue, Pleasanton. Potential environmental effects include: compatibility with City and County general plan policies; loss of agricultural use on prime soils; inducement of population growth; construction of habitable structures in a geologically sensitive area; changes in groundwater recharge/extraction; addition of potentially toxic materials to surface water runoff; increased runoff; addition of air pollutants in an area of marginally acceptable air quality; increased traffic on local streets and freeways; impacts to riparian corridors and intermittent wetland areas; use of energy and other resources; potential exposure of future population to hazardous materials/health hazards; generation of noise to adjoining land uses and exposure of residents to high freeway, arterial street, train, fairgrounds, and industrial use noise sources; expansion/extension of City services (water, sewer, storm drainage, police, fire, park and recreation, general government), local school services, and other governmental services (regional parks, County services, etc.); change in views from designated scenic routes and modification of scenic vistas; and possible disturbance of archaeological resources.

## **APPENDIX B**

### **PLEASANTON, ALAMEDA COUNTY AND SFWD STAFF COOPERATIVE PLAN RECOMMENDATIONS BERNAL PROPERTY DEVELOPMENT PLAN**

**December 12, 1995**

#### **PREAMBLE**

Alameda County, the City of Pleasanton and the San Francisco Water Department agreed to a cooperative planning process to determine whether a mutually acceptable land use development program could be achieved for the Bernal property. That agreement led to a concentrated effort involving nearly 25 meetings by the respective staffs and at least eight public hearings held before the Pleasanton City Council or the Committee of Decision Makers. This four-month effort benefited from the preparation of two published draft environmental impact reports examining various development alternatives following years of planning review of various development concepts.

As a result of this cooperative planning process, the staff representatives have identified a land use development program that reflects a reasonable balance of complex regional and local public interests as well as the economic objectives and limitations of the respective public agencies. The program outlined below was agreed upon following a critical review of: (a) location, density, mix, and type of land uses acceptable for the site; (b) size, location, and funding of infrastructure and public facilities; (c) availability of public services for the planned community; (d) measures necessary to mitigate traffic and other environmental impacts of the development to preserve the quality of life in Pleasanton; and (e) other issues affecting the successful implementation of the agreed upon land use program.

Accordingly, the staff recommendation to the Committee of Decision Makers is to affirm the acceptability of the land use development program outlined below and to recommend that their respective jurisdictions undertake an intensive and expedited public review process leading to final decision on the future use of the Bernal property.

To implement the decision, the respective staffs would draft a letter agreement committing each jurisdiction to a public review process for a specific plan, zoning classification and development agreement in accord with a four-month schedule. The letter agreement would express the intent of the parties to use best efforts to achieve the following: The San Francisco Water Department would agree to allow the Bernal Project to be annexed to and developed within the City of Pleasanton, provided that Pleasanton approves a land use program consistent with the mutually acceptable plan endorsed by the Committee of Decision Makers, and permits an economically viable project. Further, the



San Francisco Water Department would commit to revise its application pending before Alameda County to reflect the modifications achieved through the cooperative planning process. Alameda County would agree to process and take action on the project based on the mutually acceptable plan. Assuming that the City of Pleasanton adopted a specific plan, Alameda County would negotiate a good faith agreement for tax sharing preliminary to annexation of the property to the City of Pleasanton.

The process for review and determination would begin with the San Francisco Water Department filing applications in the Pleasanton Planning Department for a specific plan, pre-zoning classification and pre-annexation development agreement. A Notice of Preparation of an environmental impact report (EIR) would be issued. However, it is anticipated that the analysis would be comprised of the material published in the two prior draft EIR's because the revisions to the land use program were devised to further mitigate environmental and public concerns. Pleasanton would then process these applications in its usual way, e.g., public hearings on the applications before the Planning Commission and the City Council. After eliciting public input and following certification of a final EIR, the Pleasanton City Council would be requested to approve the specific plan, pre-zoning classification and pre-annexation development agreement. In light of the intensive public review process to date, the objective would be to complete this effort within approximately four months, based on the final County action scheduled in April 1996.

During this time frame, as provided in Section V of the Cooperative Planning Process, Alameda County will continue its public review of the project, as revised through this cooperative planning effort. The Water Department's decision to proceed with the application in the County is based on the firm belief that the proposed land use program offers substantial public benefits and represents a responsible means toward attaining numerous public policy objectives. Recognizing the need for independent review by the City of Pleasanton and the possibility that the project may not be incorporated by the City, the Water Department needs to pursue a final determination of the proposed land use program from the governmental agency with jurisdiction over the property.

## **LAND USE**

### **Residential**

- Reduce maximum buildout of Project from 3,380 units to a range of 1,600 to 2,500 units. This Project developed in Pleasanton would result in a range of approximately 1,600 to 1,900 units. This assumes residential development will occur on approximately 200 net developable acres. The

upper range of 2,500 units would be approached only if necessary to fund services if development were to occur in the unincorporated County.

- Distribute high density residential development to southern and central parcels.

### Retail Commercial

- Relocate 20-acre Village Center (approximately 200,000 square feet) to corner of Valley and Bernal Avenues. Eliminate one roadway from Project to Bernal Avenue.
- Zoning to permit public institutions and churches.

### Office/Other Commercial/Hotel

- Reduce office and other commercial development from 550,000 square feet maximum to 377,000 square feet maximum on approximately 30 acres by reducing floor area ratio.
- Identified site for potential hotel complex fronting golf course.

### Golf Course

- The golf course was redesigned to provide nine holes on each side of I-680 and enhance view corridors through Project.

### Parks and Project Open Space

- Project to dedicate a total of 30 acres of neighborhood and community parks, which exceeds City park standard requirements. In addition to exceeding City's park acreage dedication standards, the Project will pay to improve both the neighborhood and community parks.
- Community park was enlarged from 14 acres to 20 acres and relocated from the southern parcel to the northeast corner adjacent to Bernal Avenue.
- Two five-acre neighborhood parks were added to the plan, one adjacent to the elementary school in the southern parcel, and one near the Bernal Avenue bridge. The community park will serve a neighborhood park



function in order to have all residences meet the City standard for access to a neighborhood park.

- Approximately 40 acres of open space on site will be provided by the project in addition to pedestrian trails and extension of regional trail systems.

### Community Facilities

- The City of Pleasanton will be provided the right to purchase that parcel of land, approximately three acres in size, located immediately west of Old Bernal Avenue and the Pleasanton Library. Purchase of property would be at fair market value based on property's current zoning designation. Right to purchase property would expire effective December 31, 1996.
- Project will provide a five-acre parcel immediately west of the 20-acre community park which will be designated for community and cultural arts uses. It will have an underlying commercial/office designation. The property would be purchased by the City of Pleasanton at fair market value based on the underlying zoning designation. A commitment to purchase the property must be made by December 31, 1997, after which time it would revert to its underlying zoning designation if not purchased by Pleasanton.

## PUBLIC FACILITIES

### Fire

- Project will dedicate an approximately one-acre site for fire station at the northeast intersection of Valley and Case Avenues consistent with Pleasanton's "Master Fire Service Plan."

### School

- Project will designate a five-acre site adjacent to the neighborhood park on southern parcel. Project will pay Pleasanton Unified School District (PUSD) school fees. PUSD has agreed to the elementary school location.

## UTILITIES

### Water

- City and San Francisco Water Department will negotiate service agreement to pay standard hook-up and service fees, offset by value associated with possible assignment of Bernal property water rights. Project will pay fair share of providing recycled water to Project for irrigation of golf course and parks and participate in exploring feasibility of providing recycled water elsewhere in Project area vicinity. Local groundwater wells may be used for irrigation of the golf course and other public landscaping until the recycled water line is feasible to install.

### Wastewater

- City will reserve sewer service capacity sufficient to ensure buildout of maximum Project. Project to pay standard hook-up and service fees offset by value attributable to Project's use of recycled water. City will grant credit against its fees for the recycled water line, will support request for credit against Dublin San Ramon Services District (DSRSD) fees, and will also seek to spread the cost of the recycled water line to other users of recycled water.

## TRANSPORTATION AND CIRCULATION

Level of Service D or better will be maintained on all Project affected City streets, intersections and interchanges. Project will improve off-site streets and intersections and construct certain General Plan circulation improvements within the property boundaries. Project will pay development impact fees that will mitigate Project's fair share costs for Bernal bridge and interchange improvements and Junipero Avenue extension. Project will also contribute \$500 per residential unit (\$950,000 based on 1,900-unit Project) towards regional traffic improvements.

## STORM DRAINAGE

The land use program would accommodate solutions to regional flood control problems consistent with policies for protection of riparian corridors. Project will provide on-site storm detention for 100-year storm to yield no runoff increase to Arroyo de la Laguna from development of property. Project plan will provide sufficient right-of-way and setbacks along Arroyo to allow Zone 7 or other public agencies to implement necessary



regional storm drainage improvements and provide connections to local and regional trail systems. Project will incorporate by-pass channel into golf course design as needed to assist in accommodating regional flood control needs. Above improvements are expected to remove upstream City properties from current flood zones. Project will pay Zone 7 impact fees which could be used to implement Arroyo storm drainage improvements.

### **AFFORDABLE HOUSING**

A rental and ownership inclusionary affordable housing program will be incorporated into the plan to provide a total of approximately 10% affordable housing on-site through utilization of Project generated fees. Twenty-five percent (25%) of rental units will be affordable to households earning 60 percent of the median income. Remaining affordable housing will be "for sale" single-family products affordable to moderate income households (earning approximately 100 percent of the median income).

### **OPEN SPACE MITIGATION**

Project will contribute a fee equal to \$1 million for public open space preservation. Preservation will be accomplished through purchase of land in fee title, acquisition of easements or development rights, dedication, or such other mechanisms that provide for long-term preservation of land in public open space. Alameda County and City of Pleasanton will jointly decide on use of the funds, with San Francisco and EBRPD included as participants in the decision-making process. In addition, the Project will fund a program, acceptable to Alameda County, for preservation of open space valued at \$750,000 through conservation easements on, or dedication of, Water Department property or acquisition of lands that would meet both open space and watershed protection objectives.

### **GROWTH MANAGEMENT**

Pleasanton will accommodate the Project's residential use pursuant to a Pre-annexation Agreement and/or Development Agreement prior to annexation. The Agreement will authorize a development program as follows:

- 1997 - 150 building permits are allocated and allowed to be issued. The Project will have right of first refusal to receive up to an additional 50 units of other developers' unused allocations if any are available as of June 30, 1997.

1998 - 150 building permits are allocated and allowed to be issued. In addition to building permits allocated, Project may include an additional 50 units of unused 1997 allocation. The Project will have right of first refusal to receive up to an additional 50 units of other developers' unused allocations if any are available as of June 30, 1998.

1999 and subsequent years:

1. Any unused 1997 or 1998 allocations not used in those years may be used in any subsequent year and are exempt from subsection 2 below. The owners of projects to which these units have been allocated shall notify the City at the times designated in the Growth Management Program of the years when building permits will be pulled.
2. 250 units/year are allocated for the year 1999-2000 and the allocation the year 2001 and thereafter is 200 units per year until the Project has been completed. No more than 250 units in years 1999 and 2000 and 200 units per year thereafter may be included in final maps approved during the calendar year. Once units have been approved in a final map, building permits for those units may be issued in any year, with the proviso that builders must notify the City of their expected use of their allocations in accordance with the City's Growth Management Program.
3. Apartment projects meeting the Project's affordable housing program are exempt from these limits and may be constructed in any year.

(bernal4.sam)





## APPENDIX C

### LAND USE ALTERNATIVES CONSIDERED AND REJECTED DURING THE SCOPING PROCESS

#### *EXCERPT FROM COUNTY EIR, CHAPTER 5*

There are four alternatives identified in Section B. Land Use Alternatives of this chapter [of the County EIR] that could substantially lessen one or more of the significant effects of the Project. During the scoping process, a series of alternatives for the Project area were considered, but rejected in accordance with CEQA Guidelines § 15126(d). This category includes alternatives to the mixed use development concept, additional lower density residential alternatives, [and] alternative urban design schemes ... .

These were rejected because: (1) they are infeasible; (2) they did not avoid or substantially lessen any of the significant effects of the Project, and/or (3) their effects cannot be reasonably ascertained or their implementation is remote and speculative.

The following is a description of these alternatives.

#### **Single Use Alternatives**

The Pleasanton General Plan, adopted 1986, requires the preparation of a Specific Plan for the mixed use development of the Bernal property. Prior to 1986, Pleasanton's General Plans of 1976 and 1982 and several land use study reports considered other alternatives to a mixed use development concept.

#### All Industrial Development Alternative

Prior to the adoption of the 1986 Pleasanton General Plan, the Bernal property was planned for general and limited industrial use on the East Parcel and industrial/commercial office use on the Central Parcel (1982 Pleasanton General Plan). In 1983, a city-appointed citizen's committee reviewed the status of industrial growth and industrial planning in Pleasanton. The report, *Industrial General Plan Review – 1983-2005*, recommended a conversion of industrial-planned lands to other uses, with the East Parcel recommended for conversion to a combination of industrial, high- and medium-density residential, public and institutional uses. The Central Parcel was recommended to be placed in an "interim" agricultural designation until 1996, after which the parcel would converted to residential use together with a 20-acre commercial facility. The report suggests that this parcel could be designed around "man-made water elements" as an aesthetic gateway to Pleasanton.

This alternative would not mitigate impacts associated with loss of agricultural land, air quality, traffic, or visual and aesthetic changes to the site; therefore, it is not environmentally superior to the proposed Project. Additionally, developing the Project area with only industrial uses is inconsistent with both the ECAP and the Pleasanton General Plan, and it would not meet the economic objectives of the Project Sponsor.



### All Office Development Alternative

The 1983 *Industrial General Plan Review Report* included consideration of the Project site for all office development as well as the consideration of other sites for this use in Pleasanton. Ultimately, the 240-acre Hacienda Business Park II site was designated for industrial and office use in the 1982 Pleasanton General Plan (the Hacienda Business Park I Plan was already under way). The report recommended that the Hacienda Business Park II site be converted to the General Plan designation of industrial/commercial/office use. This recommendation was followed up with the adoption of the Hacienda Business Park Phase II Plan and EIR in 1985. In the same report, the San Francisco Water Department lands were not recommended for office development. The substantial office development that has occurred at the Hacienda Business Park and elsewhere in the City of Pleasanton works against consideration of an all-office development scheme for the Project site.

This alternative would not mitigate impacts associated with loss of agricultural land, air quality, traffic, or visual and aesthetic changes to the site; therefore, it is not environmentally superior to the proposed Project. Additionally, developing the Project area with only office uses is inconsistent with both the ECAP and the Pleasanton General Plan, and it would not meet the economic objectives of the Project Sponsor.

### All Housing Development Alternative

A residential-only development scheme, representing conventional residential development as found north of the site on Valley Avenue, was analyzed by the Pleasanton citizen committee. The committee ascertained that the total number of dwelling units which could result ranged from 2,500 to 3,000. In 1985 a Pleasanton Residential Review Committee evaluated undeveloped areas within City and made recommendations regarding the City's holding capacity, residential land use designations, growth management, and housing element policies. The committee recommended the Project area be designated as a Specific Plan area and as a study zone for future consideration of housing and open space including medium- and high-density residential use, commercial and office use, industrial use, and parks and open space. The committee concluded that "the parcel is an ideal location for a planned mixed use project featuring varying residential densities, neighborhood freeway commercial uses, industrial and park uses." An all-housing scheme for the site was thus not considered any further in the planning process.

Furthermore, this alternative would not mitigate impacts associated with loss of agricultural land, air quality, traffic, or visual and aesthetic changes to the site; therefore, it is not environmentally superior to the proposed Project. Additionally, developing the Project area with only housing uses is inconsistent with both the ECAP and the Pleasanton General Plan, and it would not meet the economic objectives of the Project Sponsor.

### Lower-Density Residential Alternatives

The DEIR analyzes a range of alternatives that reflect various residential densities, including five units, 2,436-3,824 units, 2,218-3,816 units, and 590 units. The five-unit alternative addresses significant adverse effects related to loss of agricultural land and visual and aesthetic resources, and the 590-unit alternative would substantially lessen the adverse effects that would contribute to cumulative impacts on air quality and level of service traffic standards. The proposed Project provides for a low range of 1,671 units as a variation on the ECAP minimum density designation of 2,218 units for the site. This alternative low range Specific Plan density would reduce, but not avoid, the Project's contribution to cumulative impacts relating to the loss of agricultural land, air quality, traffic, and visual and aesthetic changes.

In light of the existing Pleasanton General Plan designation, and the applicable Alameda County ECAP policies for the site, additional lower density residential alternatives were not considered. The Alameda ECAP process considered cumulative impacts of urban development in the area, and identified the Project area as appropriate for infill urban development within the urban growth boundary, in furtherance of ECAP policies, including fostering an appropriate jobs/housing balance in the area. It would be inconsistent with state policies that foster comprehensive planning and housing development to postulate additional lower density residential alternatives beyond those required to address the significant unavoidable effects of the Project

### **Alternative Design Schemes**

During development of the Bernal Property Specific Plan over the course of the past five years, various alternative design schemes have been proposed or suggested by others. Some of these were discussed at the time San Francisco submitted its 1990 Concept Plan and others have come up during the preparation of the Pleasanton Preferred Plan by the Pleasanton Citizens Steering Committee.

In general, these schemes have common design goals reflecting traditional forms of community development which emphasize grid street systems and compact pedestrian-oriented development with mixed land uses. These schemes represent essentially the same design goals of the current Project. Although the actual schemes for layout and organization of circulation and land uses can vary widely, these variances are essentially urban design issues rather than environmental impact issues. These schemes would not mitigate the cumulative impacts associated with the Project and are not environmentally superior. Therefore, these alternative design schemes were not considered as alternatives.





## **APPENDIX D**

### **AIR QUALITY METHODOLOGY AND ASSUMPTIONS**

#### **CALINE-4 MODELING**

The CALINE-4 model is a fourth-generation line source air quality model that is based on the Gaussian diffusion equation and employs a mixing zone concept to characterize pollutant dispersion over the roadway. Given source strength, meteorology, site geometry and site characteristics, the model predicts pollutant concentrations for receptors located within 150 meters of the roadway.

The CALINE-4 model allows roadways to be broken into multiple links that can vary in traffic volume, emission rates, height, width, etc.. The intersection mode of the model was employed, which distributes emissions along each leg of the intersection for free-flow traffic, idling traffic and accelerating and decelerating traffic.

The worst case mode of the CALINE-4 model was employed. In this mode the wind direction is varied to determine which wind direction results in the highest concentration for each receptor. Emission factors were derived from the California Air Resources Board EMFAC-7G computer model.

Receptors (locations where the model calculates concentrations) were located at distance of 20 feet from the roadway edge for all four corners of the intersection and at locations 50 feet in either direction, for a total of 12 receptors. Figure 1 is a schematic diagram showing the location of receptors.

The computation of carbon monoxide levels assumed the following worst-case meteorological conditions:

- Windspeed: 1 mps
- Stability: F Category
- Mixing Height: 1000 meters
- Surface Roughness: 100 cm
- Standard Deviation of Wind Direction: 10 degrees

The CALINE-4 model calculates the local contribution of nearby roads to the total concentration. The other contribution is the background level attributed to more distant traffic. The 1-hour background level was calculated as 4.5 PPM and the 8-hour background level was calculated as 2.3 PPM in the analysis year of 2000. The 1-hour background level was calculated as 3.5 PPM and the 8-hour background level was calculated as 1.8 PPM in the analysis year of 2010. These background concentrations were calculated using base year 1992 isopleths of carbon monoxide concentration and correction factors prepared by the Bay Area Air Quality Management District.

To calculate 8-hour concentrations from the 1-hour output of the CALINE-4 model, a persistence factor of 0.70 was employed.



## URBEMIS-5

Estimates of regional emissions generated by project traffic were made using a program called URBEMIS-5.<sup>1</sup> URBEMIS-5 is a program which estimate the emissions that result from various land use development projects. Land use project can include residential uses such as single-family dwelling units, apartments and condominiums, and nonresidential uses such as shopping centers, office buildings, and industrial parks. URBEMIS-5 contains default values for much of the information needed to calculate emissions. However, project-specific, user-supplied information can also be used when it is available.

Inputs to the URBEMIS-5 program include trip generation rates, vehicle mix, average trip length by trip type and average speed. Trip generation rates for project land uses and land uses removed by the project were provided by the project transportation consultant. Average trip lengths for the Pleasanton Superdistrict and Alameda County were used<sup>2</sup>. Average speed for all types of trips was assumed to be 30 MPH.

The URBEMIS-5 runs assumed summertime conditions. The URBEMIS-5 program provides emission rates for Total Organic Gases (TOG). The TOG emission was multiplied by 0.92 to estimate Reactive Organic Gases (ROG).

PM-10 emissions from road dust are not calculated by the URBEMIS-5 program. Daily Vehicle Miles Traveled (VMT) generated by project traffic was multiplied by a road dust emission factor<sup>3</sup> of 0.69 grams per mile, and this emission was added to the URBEMIS-5 estimates of exhaust emissions.

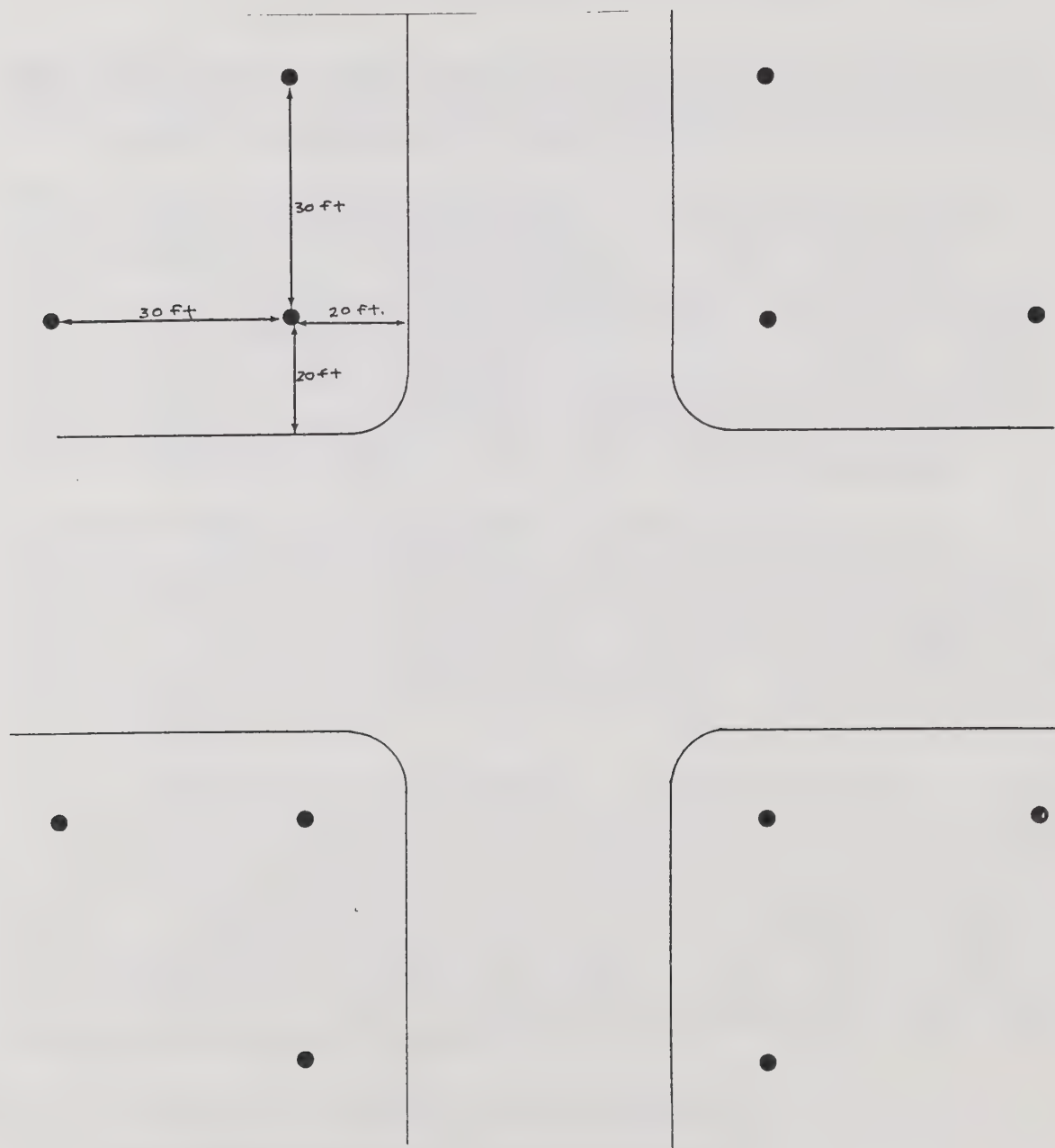
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<sup>1</sup> California Air Resources Board, URBEMIS-5 Computer Program Version 5.0 User Guide, July 1995.

<sup>2</sup> Metropolitan Transportation Commission, Bay Area Travel Forecasts, Congestion Management Program Databook #1: Regional Summary, 1991.

<sup>3</sup> Bay Area Air Quality Management District, BAAQMD CEQA Guidelines, 1996.

Figure 1: Location of CALINE-4 Receptors







## APPENDIX E

### FUNDAMENTAL CONCEPTS OF ENVIRONMENTAL ACOUSTICS

Noise is defined as unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing. Decibels and other technical terms are defined in Table E-1.

Most of the sounds which we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate a sound. The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies of a sound in accordance with a weighting that reflects the facts that human hearing is less sensitive at low frequencies and extreme high frequencies than in the frequency mid-range. This is called "A" weighting, and the decibel level so measured is called the A-weighted sound level (dBA). In practice, the level of a sound source is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve. Typical A-weighted noise levels measured in the environment and in industry are shown in Table E-2 for different types of noise.

Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources which create a relatively steady background noise in which no particular source is identifiable. To describe the time-varying character of environmental noise, the statistical noise descriptors, L01, L10, L50, and L90, are commonly used. They are the A-weighted noise levels equaled or exceeded during 1%, 10%, 50%, and 90% of a stated time period. A single number descriptor called the Leq is also widely used. The Leq is the average A-weighted noise level during a stated period of time.

In determining the daily level of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises. During the nighttime, exterior background noises are generally lower than the daytime levels. However, most household noise also decreases at night and exterior noise becomes very noticeable. Further, most people sleep at night and are very sensitive to noise intrusion. To account for human sensitivity to nighttime noise levels, a descriptor, Ldn (day/night average sound level), was developed. The Ldn divides the 24-hour day into the daytime of 7:00 AM to 10:00 PM and the nighttime of 10:00 PM to 7:00 AM. The nighttime noise level is weighted 10 dB higher than the daytime noise level. The Community Noise Equivalent Level (CNEL) is another 24-hour average which includes both an evening and nighttime weighting.

The effects of noise on people can be listed in three general categories:

- subjective effects of annoyance, nuisance, dissatisfaction
- interference with activities such as speech, sleep, learning
- physiological effects such as startling, hearing loss



The levels associated with environmental noise, in almost every case, produce effects only in the first two categories. Workers in industrial plants can experience noise in the last category. Unfortunately, there is as yet no completely satisfactory way to measure the subjective effects of noise, or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance, and habituation to noise over differing individual past experiences with noise.

Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of the existing environment to which one has adapted: the so-called "ambient". In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by the hearers.

With regard to increases in A-weighted noise level, knowledge of the following relationships will be helpful in understanding this report.

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived.
- Outside of the laboratory, a 3 dB change is considered a just-perceivable difference.
- A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
- A 10 dB change is subjectively heard as approximately a doubling in loudness, and would almost certainly cause an adverse change in community response.

TERM	DEFINITIONS
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.
$L_{01}$ , $L_{10}$ , $L_{50}$ , $L_{90}$	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Equivalent Noise Level, $L_{eq}$	The average A-weighted noise level during the measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 pm to 10:00 pm and after addition of 10 decibels to sound levels in the night between 10:00 pm and 7:00 am.
Day/Night Noise Level, $L_{dn}$	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.
$L_{max}$ , $L_{min}$	The maximum and minimum A-weighted noise level during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

**Definitions of Acoustical Terms**

**Table E-1**



At a Given Distance From Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Impression
	140		
Civil Defense Siren (100')	130		
Jet Takeoff (200')	120		Pain Threshold
	110	Rock Music Concert	
Pile Driver (50')	100		Very Loud
Ambulance Siren (100')			
	90	Boiler Room	
Freight Cars (50')		Printing Press Plant	
Pneumatic Drill (50')	80	In Kitchen With Garbage Disposal Running	
Freeway (100')			
	70		Moderately Loud
Vacuum Cleaner (10')	60	Data Processing Center	
		Department Store	
Light Traffic (100')	50	Private Business Office	
Large Transformer (200')			
	40		Quiet
Soft Whisper (5')	30	Quiet Bedroom	
	20	Recording Studio	
	10		Threshold of Hearing
	0		

**Typical Sound Levels Measured  
in the Environment and Industry**

**Table E-2**

## APPENDIX F

### MEMORANDUM

**Date:** March 4, 1997  
**From:** Scott Gregory, Lamphier & Associates  
**To:** Roberta Mundie, Mundie & Associates  
**Subject:** Heritage Tree Survey

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The following memo contains the results of a field survey taken on March 3, 1997 of the San Francisco Water Department's Bernal Property (approximately 510 acres total) for the purpose of identifying those existing trees on the property that may be considered "Heritage trees" according to City of Pleasanton criteria. For purposes of this survey, trees have been defined according to City of Pleasanton Municipal Code, Section 17.16.006 (Tree Preservation Ordinance), as any tree which meets the following criteria:

- 1) any single-trunked tree with a circumference of fifty-five inches (55") or more, measured four and one-half feet (4½') above ground level,
- 2) any multi-trunked tree of which the two largest trunks have a circumference of more than 55' measured 4½' above ground,
- 3) any tree 35' or more in height.

This survey was undertaken for the sole purpose of locating potential heritage trees on the property, and is for use by the City of Pleasanton pursuant to preparation of the Bernal Property Specific Plan EIR. This survey was not conducted pursuant to any permit application to remove such trees, it was not prepared by a certified arborist, nor was it prepared to meet the requirements for a "tree survey plan" according to Section 17.16.050 for new property development.

The limits of the survey did not include the dense riparian canopy within the Arroyo de la Laguna corridor. The boundary for defining the Arroyo corridor is the maintenance access road that parallels the arroyo. Any vegetation to the west of that access road was not included in this survey.

Heritage trees meeting Pleasanton criteria were found in 4 primary areas: 1) adjacent to the Arroyo de la Laguna corridor, 2) associated with the old farmstead in the Western parcel, 3) along Bernal Avenue, and 4) in the vicinity of the knoll on the Eastern parcel.

The following table summarizes the findings of the heritage tree survey, and is keyed to the attached figures - Location of Heritage Trees.



## Heritage Trees Adjacent to the Arroyo de la Laguna Corridor

<u>Site</u>	<u>Species</u>	<u>Circumference</u>
1	valley oak	60"
2	valley oak	90"
3	valley oak	110"
4	valley oak	multi-trunk - 60"
5	valley oak	80"
6	valley oak	(dead)
7	valley oak	115"
8	valley oak	120"
9	valley oak	multi-trunk
10	valley oak	110"
11	valley oak	60"
12	valley oak	105"
13	Sycamore	200"+
14	valley oak	90"
15	valley oak	multi-trunk
16	valley oak	150"
17	Sycamore	200"+
18	valley oak	80"
19	valley oak	105"
20	valley oak	100"
21	valley oak	110"
22	Sycamore	90"
23	Sycamore	90"
24	valley oak	110"
25	valley oak	100"
26	valley oak	110"
27	valley oak	200"
28	valley oak	150"

## Heritage Trees Associated with the Old Farmstead

1	California laurel (bay)	ornamental
2	valley oak	
3	date palm	ornamental
4	holly oak	ornamental
5	holly oak	ornamental
6	date palm	ornamental
7	California laurel (bay)	ornamental
8	valley oak	(dead)
9	black walnut	ornamental
10	black walnut	ornamental
11	black walnut	ornamental
12	black walnut	ornamental

### **Heritage Trees Along Bernal Avenue**

1	black walnut	heritage tree size, not measured
2	Sycamore	heritage tree size, not measured
3	black walnut	heritage tree size, not measured
4	black walnut	heritage tree size, not measured
5	Sycamore	heritage tree size, not measured
6	black walnut	heritage tree size, not measured
7	black walnut	not heritage tree size
8	black walnut	not heritage tree size
9	black walnut	not heritage tree size
10	black walnut	not heritage tree size
11	black walnut	not heritage tree size
12	black walnut	not heritage tree size
13	black walnut	not heritage tree size
14	black walnut	not heritage tree size

### **Heritage Trees on the Eastern Parcel**

1	valley oak	heritage tree size, not measured
2	valley oak	heritage tree size, not measured
3	valley oak	heritage tree size, not measured
4	valley oak	heritage tree size, not measured
5	valley oak	heritage tree size, not measured
6	valley oak	heritage tree size, not measured

cc: Rick Nelson, SFWD  
Brian Swift, City of Pleasanton  
Jeff Grote, TPC





## Heritage Trees on the Bernal Property

Source: Lamphier & Associates  
March 1997

## **APPENDIX G**

### **Environmental Vision Visual Simulation Methods**

#### ***Introduction***

Environmental Vision produced a series of visual simulations to illustrate "before" and "after" visual conditions. The simulation images show location, scale, and visual appearance of proposed project features from a selected viewpoint on I-680. The computer-generated visual simulations are the results of an objective analytical and computer modeling process described briefly below. The images are accurate within the constraints of available site and project data.

#### ***Field Reconnaissance***

In March 1997, site reconnaissance was conducted in order to view the site and surrounding area, to identify potential key viewpoints, and to shoot representative photographs of existing visual conditions for visual simulation purposes. Environmental Vision employed a combination of photo-data recording sheets and scale basemap annotation to document site photography. A single lens reflex (SLR) 35mm camera with a 35mm lens was used to shoot site photographs. The view described below represents a view angle of approximately 54%.

#### ***Simulation Viewpoint***

A viewpoint located along northbound I-680 about 0.3 mile north of the railroad overcrossing was selected for visual simulation. Currently motorists traveling northbound on this segment of I-680 enjoy views of Mt. Diablo as a scenic backdrop to panoramic open landscape views of the West Parcel. Several factors including site visibility, the number/sensitivity of viewers, and potential effect on public views were considered in selecting the simulation viewpoint. The viewpoint location is delineated on a key map showing the project site and surrounding vicinity.

#### ***Visual Simulation Assumptions***

Environmental Vision employed computer modeling and rendering techniques to produce the simulation images. Existing topographic and site data provided the basis for developing an initial digital model. This digital site model, combined with three dimensional computer models of the proposed project elements, was utilized to produce a complete "wireframe" and solid computer model of the proposed project. Technical assumptions employed for computer modeling purposes include the following:

- The sound berm located along the edge of I-680 (Visual Simulation, Figure 36) is 16 feet high with 2:1 and 2.5:1 side slopes as shown in the Landscaped Sound berm Concept Diagram (*County Specific Plan*, Figure 6-11).



- The sound berm located in the golf course fairway and at the edge of the residential area near the city center (Visual Simulation, Figure 37) is 11 feet high with the same side slopes as referenced above.

Viewer location was digitized from topographic maps using 5 feet as the assumed eye level. Computer "wire frame" perspective plots were then overlaid on photographs to verify scale and viewpoint location. Digital visual simulation images were produced as a next step based on computer renderings of the 3-D model combined with high-resolution digital versions of base photographs. The final "hardcopy" visual simulation images that appear in the EIR document were produced from the digital image files.

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